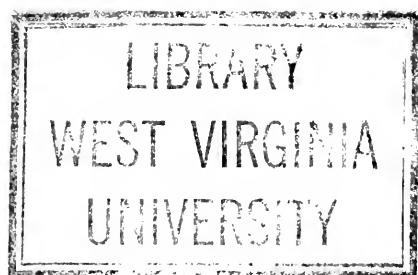


West Virginia University Libraries



3 0802 101623525 6

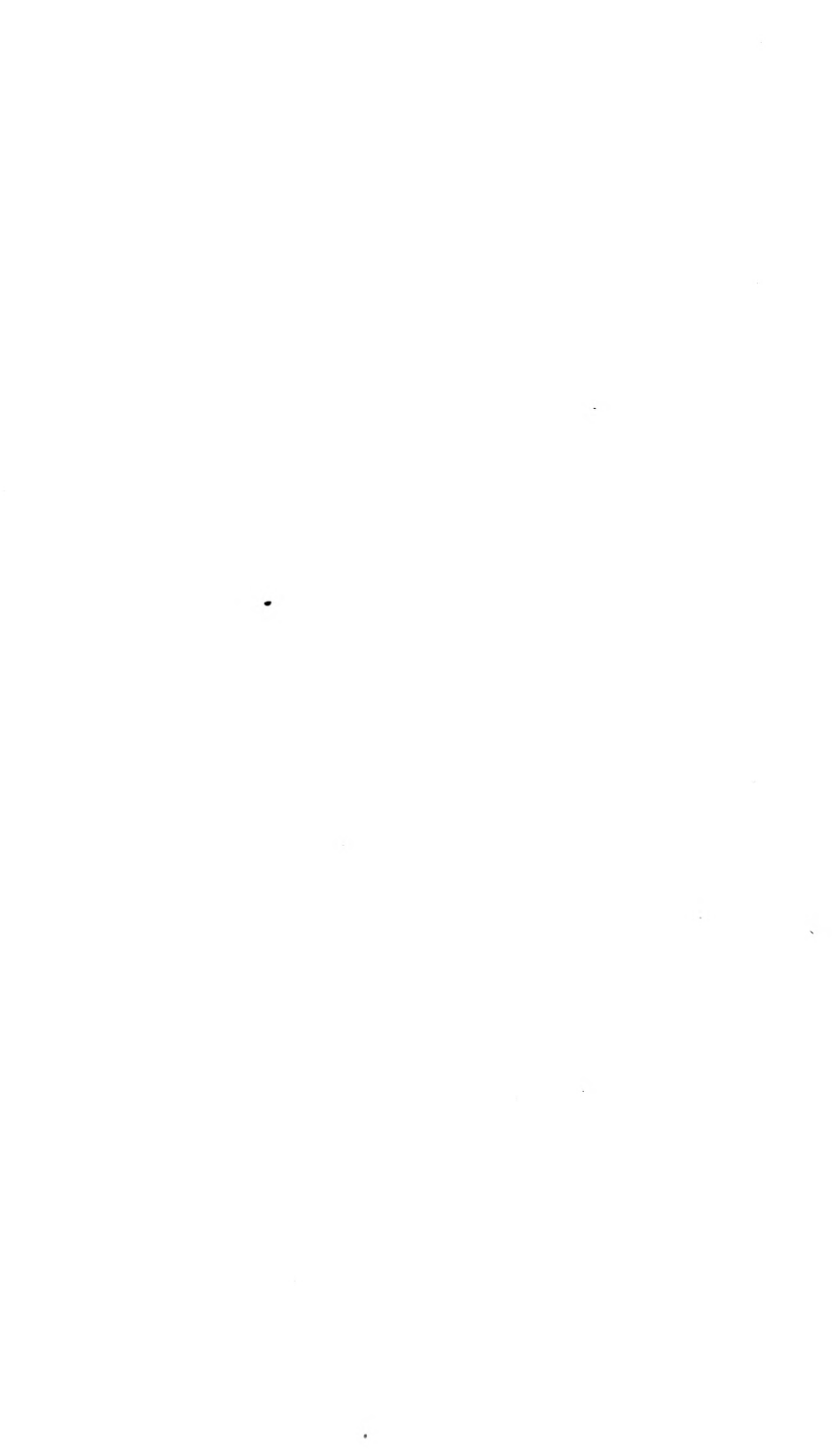


This book must not be
taken from the Library
building.

Compliments of

Geo. W. Paul,

Chief Mine Inspector.



SIXTEENTH, SEVENTEENTH AND EIGHTEENTH
ANNUAL REPORTS.

COAL MINES

IN THE STATE OF

WEST VIRGINIA, U. S. A.

FOR THE YEARS ENDING JUNE 30,

1898

1899

1900

BY

JAMES W. PAUL, CHIEF MINE INSPECTOR,

CHARLESTON.

W
331.7622
MW 52v
16th-18th
5 / 2

Library
West Virginia University

TABLE OF CONTENTS.

	Page.
Letter of transmittal.....	1
Introduction	3

PART I.

For the year ending June 30th, 1898.....	5
--	---

PART II.

For the year ending June 30th, 1899.....	125
--	-----

PART III.

For the year ending June 30th, 1900.....	243
--	-----

TABLE OF CONTENTS.

PART I—1893.

For the year ending June 30th.

CHAPTER I.

General summary of the report for the year ending June 30, 1898.....	5
--	---

CHAPTER II.

Production of Coal and Coke.....	8
----------------------------------	---

CHAPTER III.

Production of Coal and Coke by counties and comments upon the growth in each.....	9
---	---

CHAPTER IV.

Coke and Coke Ovens.....	32
--------------------------	----

CHAPTER V.

Mining machines and coal production by them.....	33
--	----

CHAPTER VI.

Wages paid and selling prices of coal and coke.....	36
---	----

CHAPTER VII.

Railroad and river transportation of coal and coke.....	37
---	----

CHAPTER VIII.

Powder used at the mines and the cost of same.....	39
--	----

CHAPTER IX.

Improvements made at the mines.....	41
-------------------------------------	----

CHAPTER X.

Strikes at coal mines.....	42
----------------------------	----

CHAPTER XI.

Explosions and fire damp.....	47
-------------------------------	----

CHAPTER XII.

Men employed and summary of tables.....	48
---	----

CHAPTER XIII.

Accidents.....	51
----------------	----

CHAPTER XIV.

Inspections made.....	63
-----------------------	----

CHAPTER XV.

Condition of and directory of mines.....	64
--	----

CHAPTER XVI.

Miners' hospitals.....	96
------------------------	----

CHAPTER XVII.

Observance of the law.....	99
----------------------------	----

CHAPTER XVIII.

Supreme Court of Appeals—Syllabus.....	102
Unconstitutional laws.....	105
Legislation proposed.....	112

LETTER OF TRANSMITTAL.

OFFICE OF THE CHIEF MINE INSPECTOR,
CHARLESTON, W. VA.

To His Excellency,

GEORGE W. ATKINSON, *Governor of West Virginia:*

SIR:—

I have the honor to submit herewith my Second Annual Report as the Chief Mine Inspector of the State of West Virginia.

This report covers the years ending June 30th, 1898, 1899 and 1900. For reasons over which I have had no control, the Annual Reports for 1898 and 1899 were not printed upon their completion in manuscript. The present report appears as the Sixteenth, Seventeenth and Eighteenth Annuals.

Very respectfully,

JAMES W. PAUL,

Chief Mine Inspector.

September 30th, 1900.

INTRODUCTION.

A few words of explanation may here be opportune. The Chief Mine Inspector has very promptly compiled the reports of his department for each year he has been in office and submitted them to the Governor of the State at or before the time specified by law.

When the report has been compiled and once delivered to the Governor it then is within the hands of those in authority to print and bind it. For reason of there being no lawful provision for the printing of "annual reports" of the State officials the reports of the Chief Mine Inspector for the years 1898 and 1899 were not authorized to be printed. It appears now that no authority ever existed for the printing of the annual reports of the Mine Inspectors, although they have been regularly printed for sixteen years previous to 1898.

This department has been subject to some newspaper criticism for reason of the failure of the reports for 1898 and 1899 to appear in print; but, as above stated, this failure was due to a full compliance with the law.

While the statistical portion of this report is valuable in many ways, the greatest value of the report should be obtained through the data given relative to accidents, their causes and prevention.

The primary purpose of this department was and is to examine coal mines as to their sanitation and ventilation and secure data upon all accidents in the coal mines of the State with the sole object of learning the conditions which govern the causes of accidents, and to suggest remedies which may prevent accidents and which may secure to the miners proper ventilation and a healthful and safe condition in which to work.

The statistical parts relative to the production of coal and coke, etc., are of secondary value compared with the data relative to the loss of human life.

The information herein contained has been carefully prepared, and should any of the figures be inaccurate in stating productions the fault, if any, will be with those reporting to this office.

The personnel of the district inspectors has experienced two changes since the last published report. On April 4th, 1898, Mr. John I. Absalom, Inspector of the Third District, tendered his resignation to take effect the 11th of April of the same year. For this act on his part Mr. Absalom assigned the reason that another position had been tendered him which would be much more remunerative to him than the position of Inspector of Mines. In his letter of resignation, Mr. Absalom in part said: "The salary of the Mine Inspectors is not commensurate with the duties as now required by the law." Mr. Edward Pinkney, of Montgomery, Fayette County, was appointed on the 12th day of April, 1898 to serve as Inspector of the Third Mining District for the unexpired term. On June 25th, 1900 Mr. S. A. Lewis, Mine Inspector for the First Mining District, offered his resignation to take effect July 1st. This resignation was accepted and Mr. D. E. Llewellyn, of Fayette County, was appointed to serve the unexpired term. By reason of more lucrative remuneration in mining employment Mr. Lewis reluctantly severed his official connection with the State. It is a matter to be regretted that the mining department of this State shall have lost the services of Mr. Absalom and Mr. Lewis, but so long as the remuneration of the Mine Inspectors is as meager as the present law provides it will be little inducement for efficient men to aspire to the position of Inspector of Mines when other mining positions afford more liberal pecuniary attractions.

This report is submitted in three parts, as follows:

PART I.—1898.

PART II.—1899.

PART III.—1900.

For the text of the report see table of contents.

ANNUAL REPORT.

PART I.—1898.

To the Governor:

SIR:—

In compliance with the statutes relative to mines and mining I have the honor to submit a record of the official conduct of the State Mine Inspectors for the year ending June 30th, 1898.

The statistical part of this report is for the year aforesaid, but the record of inspections made is for the eleven months ending June 30th, this latter digression being explained in my previous report.

CHAPTER I.

General Summary of the Report for the Year Ending June 30th.

The production of Coal and Coke for the year was Coal, 14,294,865 tons of 2240 lbs., and Coke, 1,742,256 tons of 2000 lbs. This is an increase in both commodities over the previous year of 2,589,036 tons of coal and 367,759 tons of coke.

The number of firms producing coal on a commercial scale was 26 greater than during 1897 and the number of mines increased 3. The increase was greater from the pick mined than from the machine mined coal. The pick mined coal increased 2,119,161 tons and the machine mined increased 469,875 tons, —the increase in the number of machines being 41.

The number of days worked at the mines was 214, an increase of 17 over the previous year, and the price paid for mining coal

was greater by two per centum, while the selling price of coal and coke was less than during the previous year,—coal selling for 4 cents less and coke selling for 11 cents less per ton.

The number of men employed at the mines and ovens during the year was greater than the previous year by 1840.

The coke ovens were operated 238 days during the year, being an increase of 30 days over 1897. Each miner produced 937 tons of coal, an increase over 1897 of 103 tons, with a gain of \$45.26 over his yearly wages during the previous year, making his earnings for 1898 amount to \$322.15.

The acres of coal worked out was 2184 for 1898 against 1734 during 1897, giving a gain of 450 acres. Reckoning from the present conditions which prevail the mines in the State are capable of producing annually 20,000,000 tons of coal without any material outlay of additional expense in the mine equipment.

The number of steam boilers reported in use at 124 mines in the State was 268, of which number 149 are insured by boiler inspection companies and 119 are not insured, however, no loss of life has been had by reason of boiler explosions at the coal mines.

The number of men killed in and about the mines in the State during the year was 90, an increase of 28 over last year, during which year 62 men were killed. The number of men non-fatally injured during the year was 121, being 46 less than during 1897.

The following table exhibits a tabulated comparison of the general summary of the contents of this report and of the report for the year preceeding showing increase and decrease in the various items,

CHAPTER I.

The following Table Exhibits a Comparative Statement and Summary of the Annual Reports for 1897 and 1898:

	For Year Ending June 30th, 1898.	For Year Ending June 30th, 1897.	Increase of 1898 over 1897.	Decrease of 1898 under 1897.....
Number of counties in which coal is mined on a commercial scale.....	20	20		
Number of firms operating coal mines on a commercial scale.....	241	215	26	
Number of openings of all kinds subject to the mining law.....	353	350	3	
Number of tons (2240 lbs.) pick mined coal from commercial mines.....	13,084,572	10,971,482	2,113,090	
Number of tons (2240 lbs.) machine mined coal from commercial mines.....	1,070,293	600,418	469,875	
Total number of tons of coal from commercial mines (2240 lbs.).....	14,154,865	11,571,900	2,582,965	
Estimated tons of coal from small mines (2240 lbs.).....	140,000	133,929	6,071	
Total number of tons of coal from all mines (2240 lbs.).....	14,294,865	11,705,829	2,589,036	
Number of tons of coal converted into coke (2000 lbs.).....	2,388,559	2,341,140	54,419	
Number of tons of coke manufactured (2000 lbs.).....	1,742,256	1,371,497	367,759	
Total value of coal at the mines.....	\$9,127,465.00	\$8,229,198.00	\$1,198,267	
Total value of coke at the ovens.....	\$1,986,171.84	\$1,718,121.25	\$268,050	
Value of a ton of coal at the mines (2240 lbs.).....	\$65.95	70.3	\$.0435	
Value of a ton of coke at the ovens (2000 lbs.).....	\$1.14	\$1.25	\$.1100	
Number of mining machines in use.....	96	55	41	
Number of coke ovens in use.....	6,166	*8,046		
Number of days the mines were in operation.....	214	197	17	
Number of days the ovens were in operation.....	238	208	30	
Number of pick miners employed in commercial coal mines.....	14,036	13,318	718	
Number of machine operators and miners employed in commercial coal mines.....	750	652	98	
Number of underground employes in commercial coal mines.....	3,806	3,199	607	
Number of outside employes connected with the commercial coal mines.....	2,148	2,047	101	
Number of coke employes.....	2,522	2,306	216	
Total number of men employed at the commercial mines and ovens.....	23,262	21,422	1,840	
Number of men killed.....	90	62	28	
Number of men injured non-fatally.....	121	167	46	
Number of men employed for each man killed.....	260	346	86	
Number of men employed for each man injured.....	193	128	65	
Tons of coal mined in commercial mines for each fatality.....	157,276	186,643		29,367
Tons of coal mined in commercial mines for each non-fatality.....	116,982	69,292	47,690	
Number of wives left widows.....	35	18	17	
Number of children left fatherless.....	95	49	46	
Acres of coal worked out.....	2,184.45	1,733.9	450.5	
Number of tons of coal produced (in commercial mines) per miner, pick and machine miners and runners included.....	937	834	103	
Average earnings of each miner per year.....	\$322.15	\$276.89	\$45.26	
Average earnings of each miner per month.....	\$26.84	\$23.07	\$2.77	
Average price per ton of 2240 lbs. received for mining (cents).....	33.94	33.2	7.4	

*Total ovens in State.

CHAPTER II.

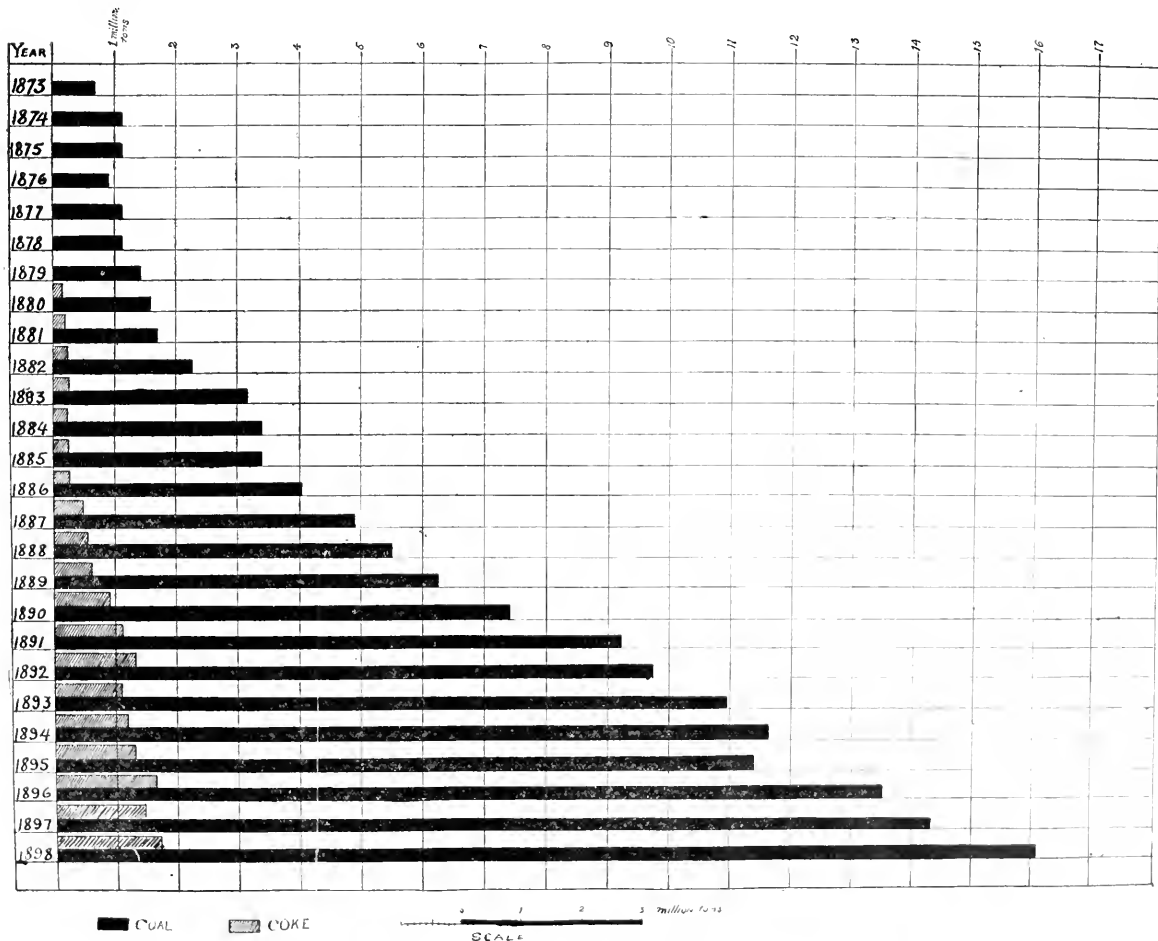
Production of Coal and Coke in West Virginia for a period of twenty-five years for coal and eighteen years for coke, showing the increase and decrease each succeeding calendar year to 1897, and production for the fiscal year ending June 30th, 1898. In compiling this table a thorough research was made in order to have it as correct as the data obtainable would permit. All State and Governmental reports were examined, and where in any difference existed in the figures those representing the greater production have been used. The production of coal includes the total quantity of coal mined.

Table Exhibiting the Production of Coal and Coke in W. Va., Since 1873. Tons of 2000 lbs.

Years.	COAL.		COKE.	
	Production.	Increase † Decrease —	Production.	Increase † Decrease —
1873	672,000	.....	.....	.....
1874	1,120,000	† 448,000	.....	.....
1875	1,120,000	.....	.....	.....
1876	896,000	— 224,000	.....	.....
1877	1,120,000	† 224,000	.....	.....
1878	1,120,000	.....	.....	.....
1879	1,400,000	† 280,000	.....	.....
1880	1,568,000	† 168,000	138,755	.....
1881	1,680,000	† 112,000	187,126	† 48,371
1882	2,240,000	† 560,000	230,398	† 43,272
1883	3,142,233	† 902,233	257,519	† 27,121
1884	3,360,000	† 17,767	223,472	— 34,047
1885	3,369,062	† 9,062	560,571	† 37,099
1886	4,005,796	† 636,734	264,158	† 3,587
1887	4,881,620	† 875,824	481,477	† 217,319
1888	5,498,800	† 617,180	529,927	† 48,450
1889	6,231,880	† 733,080	697,880	† 77,953
1890	7,394,654	† 1,162,774	892,377	† 284,497
1891	9,220,665	† 1,826,011	1,208,418	† 316,041
1892	9,738,755	† 518,090	1,333,439	† 125,021
1893	10,930,070	† 1,191,315	1,090,909	— 242,530
1894	11,627,757	† 697,687	1,193,933	† 103,024
1895	11,387,961	— 239,796	1,285,206	† 91,273
1896	13,509,964	† 2,122,003	1,649,755	† 364,549
1897	14,360,455	† 850,491	1,476,328	— 173,427
1898	16,010,248	.....	1,742,256	.....

Graphic representation of the production of Coal & Coke in West Va.
for the calendar years 1873 to 1897, and for the fiscal year ending
June 30th, 1898. Tons of 2000lbs.

PLATE I



The above table reveals the fact that twice within a period of twenty-five years the production of coal for any one year fell below that of the preceeding year, they being 1876, when there was a decrease of 224,000 tons, and 1895, with a decrease of 239,796 tons.

The coke production from 1880 to 1898, a period of 18 years, has suffered three reductions; in 1884 the decrease under 1883 was 34,047 tons, in 1893 a decrease of 242,530 tons under 1892, and in 1897 a decrease of 173,427 tons under 1896. The average increase of coal per year has been 547,538 tons, and the average increase of coke has been 74,309 tons.

The growth of the Coal and Coke industries for the period covered by the table shows an increase in coal of 13,688,455 tons, and coke of 1,337,573 tons.

The diagram exhibited on plate 1 illustrates graphically the growth of the Coal and Coke industry in the State, the former from 1873 and the latter from 1880 up to the date of this report.

CHAPTER III.

PRODUCTION OF COAL AND COKE.

1898.

The figures in the tables representing the production of coal represent all of the coal taken from the mine.

The figures include the coal used locally, at the mine, coke ovens and the quantity shipped.

Of the 14,154,865 tons produced at commercial mines,

53,312 tons were used in operating the mines,

254,410 " " sold to local trade,

2,579,062 " " used in the manufacture of Coke,

and 11,268,081 " " shipped, principally out of the State.

Total 14,154,865

NAME OF COUNTY.	Production.			Distribution.				Coke (tons of 2,000 lbs.)		
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mines.	Sold to Local Trade and Tenants.	Used in Coke Ovens.	Quantity Shipped.	First Six Months.	Second Six Months.	Total for the Year.
Barbour.....	29,880	18,720	48,600	112	300	1,800	46,378		1,350	1,350
Brooke.....	27,924	28,869	56,793	131	27,365		29,094			
Hancock.....	28,390	14,180	42,570		42,870					
Harrison.....	149,916	121,638	271,554	1,066	5,934	9,031	259,588	2,052	3,364	5,419
Marion.....	904,135	755,490	1,659,625	11,023	8,226	234,604	1,385,718	49,218	99,812	149,060
Marshall.....	90,793	75,079	165,871	2,825	9,480		153,369			
Mineral.....	269,624	211,136	510,760	206	2,297		508,341			
Monongalia.....	37,261	31,663	68,924	50	259	19,725	49,067	7,618	1,719	12,337
Ohio.....	51,698	45,214	96,912	625	22,858		73,436			
Preston.....	73,780	95,264	169,044	1,432	1,012	17,536	119,034	13,722	14,728	28,450
Taylor.....	128,836	61,696	190,532		2,560		190,282			
Tucker.....	120,682	40,815	161,497	2,971	4,962	318,891	474,610	106,755	122,406	229,261
Kanawha.....	511,711	698,402	1,210,116	3,866	9,825	33,033	1,166,362	11,841	9,737	21,578
Mason.....	52,524	56,680	109,204	2,472	41,027		63,703			
Putnam.....	41,792	87,669	129,461	1,314	41,027		127,367			
Fayette.....	1,916,648	2,043,618	3,960,266	13,998	49,372	390,100	3,506,196	171,540	222,512	394,052
Raleigh.....	56,870	42,445	99,315	600	1,000	29,602	51,633	6,582	13,124	20,007
Mingo.....	195,854	187,426	383,280	600	1,925		380,755			
McDowell.....	1,506,177	1,677,352	3,183,529	10,248	18,375	1,054,374	2,100,352	299,183	432,196	731,481
Mercer.....	546,147	458,222	1,004,370	1,032	5,224	213,313	784,780	66,577	82,181	149,061
Totals.....	7,023,647	7,131,218	14,154,865	563,312	251,110	2,579,062	11,268,081	735,094	1,007,162	1,742,256
Small Mines.....	70,000	70,000	140,000							
Grand Total.....	7,093,647	7,201,218	14,294,865							

Table Showing the Order in Production on Coal and Coke by Counties for Year Ending June 30th, 1898.

NAME OF COUNTY.	No. of Mines.	Coal (tons of 2,240 lbs.).			Coke (tons of 2,000 lbs.).			Order in Production.	
		First Six Months.	Second Six Months.	Total.	First Six Months.	Second Six Months.	Total.	Coal.	Coke.
Barbour.....	3	29,880	18,720	48,600	.....	1,350	1,350	19	11
Brooke.....	3	27,924	28,839	56,763	.....	.....	.....	18	.....
Hancock.....	3	28,336	14,480	42,816	.....	.....	.....	20	.....
Harrison.....	13	149,916	121,638	271,554	2,055	3,364	5,419	9	10
Marion.....	15	904,135	735,490	1,639,625	49,218	99,842	149,060	3	5
Marshall.....	4	90,795	75,079	165,874	.....	.....	.....	12	.....
Mineral.....	7	269,624	241,136	510,760	.....	.....	.....	7	.....
Monongahia.....	2	37,264	31,603	68,867	7,618	4,719	12,337	17	9
Ohio.....	6	51,698	45,214	96,912	.....	.....	.....	15	.....
Preston.....	4	73,789	95,264	169,054	13,722	11,728	25,450	11	6
Taylor.....	4	128,836	61,696	190,532	.....	.....	.....	10	.....
Tucker.....	8	420,682	410,815	831,497	106,755	122,506	229,261	6	3
Kanawha.....	11	514,744	698,402	1,213,146	11,841	9,737	21,578	4	7
Mason.....	8	52,324	56,689	109,014	.....	.....	.....	14	.....
Putnam.....	2	41,792	87,059	128,851	.....	.....	.....	13	.....
Fayette.....	66	1,916,648	2,043,618	3,960,266	171,540	222,512	394,052	1	2
Raleigh.....	1	36,879	42,445	79,324	6,583	13,424	20,007	16	8
Mingo.....	11	195,854	187,426	383,280	.....	.....	.....	8	.....
McDowell.....	31	1,506,177	1,677,352	3,183,529	299,185	432,496	731,681	2	1
Mercer.....	9	546,147	458,232	1,004,379	66,577	82,484	149,061	5	4
Totals.....	241	7,023,647	7,131,218	14,154,865	735,094	1,007,162	1,742,256	.....	.....
Small Mines.....	.....	70,000	70,000	140,000	.....	.....	.....	.....	.....
Grand Total.....	.....	7,093,647	7,201,218	14,294,865	.....	.....	.....	.....	.....

Production of Coal and Coke in Barbour County.

NAME OF MINE.	Coal (tons of 2,240 lbs.)						Coke (tons of 2,000 lbs.)	
	Production.			Distribution.			Second six months.	Total for the year.
	First six months.	Second six months.	Total for the year.	Used in operating the mine.	Sold to local trade and tenants.	Used in coke ovens.		
Junior.....	18,000	15,000	33,000	142	300	1,800	30,758	1,350
Hall.....	6,500	3,500	10,000	.....	.....	.....	10,000	.....
Arden.....	5,380	220	5,600	.....	.....	.....	5,600	.....
Totals.....	29,880	18,720	48,600	142	300	1,800	46,358	1,350

Barbour retains its position as a coal producer, being 19 in the order of coal producing counties. This county is destined to become a great coal producer since the coal deposits will admit of a much greater yield with new developments. The increase over last year's production is 16,942 tons. Barbour has for the first time become a coke producer with 1,350 tons to its credit.

Production of Coal in Brooke County.

Name of Mine.	Coal (tons of 2,240 lbs.)					
	Production.			Distribution.		
	First six months.	Second six months.	Total for the year.	Used in operating the mine.	Sold to loc'l trade & tenants.	Quantity Shipped.
Blanche.....	6,696	9,553	16,249	.....	16,249	.....
Gilchrist.....	15,188	13,258	28,446	.....	.....	28,446
Wellsburg.....	6,040	6,058	12,098	134	11,316	648
Totals.....	27,924	28,869	56,793	134	27,565	29,094

The production of coal in this county has increased 14,595 tons over the previous year, but whereas Brooke County last year was the 17th in order of production it has now become the 18th, being the position held by Hancock last year, and by Monongalia this year.

Production of Coal in Hancock County.

NAME OF MINE.	COAL (TONS OF 2,240 LBS.)					
	PRODUCTION.			DISTRIBUTION.		
	First Six Months.	Second Six Months.	Total for the Year.	Used In Operating Mine.	Sold to Local Trade & Tenants.	Quantity Shipped.
Stigo.....	13,133	.....	13,133	.....	13,133	.....
Marquet.....	14,186	13,052	27,238	.....	27,238	.....
McElfresh.....	1,071	1,428	2,499	.....	2,499	.....
Totals.....	28,390	14,480	42,870	.....	42,870	.....

This County increased its production 9,032 tons over 1897, but has fallen two points in the order of producing counties. In 1897 the county was 18th in point of production, while it is now 20th.

Production of Coal in Harrison County.

NAME OF MINE.	Coal (tons of 2240 lbs.)				Coke (tons of 2000 lbs.)			
	Production.		Total for the Year.	Distribution.			Quantity Shipped.	
	First Six Months.	Second Six Months.		Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.		
Bingamon.....	11,506	814	12,320				12,320	
Conelson.....	6,367	7,151	14,115				14,115	
Farrum.....	18,000	28,000	46,000	1,000	3,000		42,000	
Jackson No. 1.....	6,900		6,900				6,900	
Fall Run.....	43,101	20,652	63,753			9,031	54,722	5,119
Briar Hill No. 1.....	6,956	7,570	14,526		25		14,501	
Glen Falls.....	9,658		9,658				9,658	
Adamston.....	22,306	31,583	53,889		247		53,642	
Howard.....	9,428	9,867	19,295		177		18,818	
Despard No. 2.....	12,857	12,857	25,714				25,714	
Mt. Clare Nos. 2 and 3.....	1,700		1,700		1,320		100	
Findlay.....	1,016	151	1,167		1,170			
Dolan.....								
Totals.....	119,911	121,658	241,569	1,000	5,934	9,031	235,589	5,119

Harrison produced 50,305 tons more coal this year than in 1897 and still holds its place as the 9th in point of production of coal, and is 10th in coke production.

Production of Coal and Coke in Marion County.

NAME OF MINE	Production.				Coal (tons of 2,240 lbs.)				Coke (tons of 2,000 lbs.)			
	Production.				Distribution.				Distribution.			
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Genants.	Used in Coke Ovens.	Quantity Shipped.	First Six Months.	Second Six Months.	Total for the Year.		
New England.....	121,864	83,402	210,225	900	1,068	30,367	177,790	9,334	11,878	21,212		
W. Fairmont-shaft.....	63,032	12,219	105,271	900	694	11,260	89,417	5,657	1,349	10,006		
Gaston.....	124,607	72,935	202,562	1,405	351	26,357	171,008	8,635	7,561	16,196		
Montana.....	135,298	96,628	241,926	1,682	1,054	43,121	199,069	12,626	13,767	26,393		
Mason.....	27,752	28,719	56,471	350	120	12,254	43,767	2,494	5,240	7,734		
Murray.....	4,217	1,100	5,317	30	15	.....	1,172	.....	.....	.....
Palatine.....	1,100	9,719	10,819	.....	.....	.....	1,100	.....	.....	.....
Aurora.....	9,719	60,812	70,531	350	1,000	15,112	49,719	.....	.....	.....
King.....	21,743	29,170	50,812	1,700	5,500	71,300	41,280	4,709	6,485	11,194		
Monongah No. 2.....	255,271	257,333	512,604	1,700	5,500	71,300	411,200	.....	42,075	42,075		
Chiefton.....	50,130	41,340	91,470	125	.....	.....	91,345	.....	.....	.....
Prichard.....	26,774	26,417	53,191	100	.....	.....	53,091	.....	.....	.....
Bryan.....	.....	940	940	13	.....	.....	927	.....	.....	.....
Anderson.....	.....	1,878	1,878	.....	.....	.....	1,878	.....	.....	.....
Worthington.....	57,906	15,001	102,907	300	135	21,453	80,819	5,763	8,487	14,250		
Totals.....	901,135	735,190	1,639,625	11,655	8,220	251,604	1,385,748	49,218	99,812	149,060		

270,943 tons more coal were produced in this County the present year than during 1897, with an increase of one producing mine. Marion continues to hold up its growing tendency and has a great future ahead. The production of coke increased but 7,017 tons. The County still retains its position as the third coal County, but has lost the fourth position to Mercer County as a coke producer.

Production of Coal in Marshall County.

Name of Mine.	Coal (tons of 2,240 lbs.)					
	Production.			Distribution.		
	First six months.	Second six months.	Total for the year.	Used in operating the mine.	Sold to local trade & tenants.	Quantity Shipped.
Boggs Run	28,040	22,248	50,288	535	892	48,861
Benwood Mill	8,942	2,933	11,875	172	.....	11,703
Glendale	33,898	33,510	67,408	1,340	714	65,354
Moundsville	19,915	16,388	36,303	778	7,874	27,651
Totals	90,795	75,079	165,874	2,825	9,480	153,569

In 1897 Marshall was the 11th in size of coal producing counties. This year it is 12th, having lost the former place to Preston County.

The increase in the production of coal in Marshall over 1897 is 3,478 tons.

Production of Coal in Mineral County.

NAME OF MINE.	Coal (tons of 2,240 lbs.)					
	Production.			Distribution.		
	First six months.	Second six months.	Total for the Year.	Used in operating the mine.	Sold to local trade & tenants.	Quantity shipped.
Windom Big Vein and Windom Gas	39,998	39,357	79,355	.....	28	79,327
Windom 4 Foot and Klondike	17,724	26,523	44,247	.....	1	44,246
Hampshire	30,672	28,695	59,367	.....	43	59,324
Elk Garden No. 6 and Elk Garden No. 7 ...	181,227	146,561	327,788	206	2,135	325,447
Totals	269,621	241,136	510,757	206	2,207	508,344

This County produced less coal than in 1897 by 26,412 tons, but still holds seventh place as a coal producer.

Production of Coal and Coke in Monongalia County.

NAME OF MINE.	Coal (tons of 2240 lbs.)						Coke (tons of 2000 lbs.)		
	Production.			Distribution.			First Six Months.	Second Six Months.	Total for the Year.
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.			
Opekiska.....	25,332	25,661	50,993	25	25	8,073	4,569	.....	4,569
Beechwood.....	11,332	5,942	17,874	25	.....	11,652	3,049	4,719	7,768
Totals.....	37,264	31,603	68,867	50	25	19,725	7,618	4,719	12,337

This county more than doubled its production of last year, having increased its output 37,579 tons and jumping from 20th to 17th place in the order of production. The county holds the same position as a coke producer, ninth, with an increase of 9,559 tons, as in 1897. Monongalia may be expected to largely increase its tonnage in the future.

Production of Coal in Ohio County.

NAME OF MINE.	Coal (Tons of 2,240 lbs.)					
	Production.			Distribution.		
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating Mine.	Sold to Local Trade and Tenants.	Quantity Shipped.
Whitaker & Manchester..	7,138	4,471	11,609	100	11,509	.....
Richland.....	14,643	10,656	25,299	.....	.....	25,299
Yochum.....	5,571	5,571	11,142	.....	11,142	.....
LaBelle.....	1,846	2,016	3,862	267	202	3,493
Elm Grove.....	22,500	22,500	45,000	356	.....	44,644
Totals.....	51,698	45,214	96,912	623	22,853	73,426

1,334 tons represents the increase in the production of coal in this county over 1897. Until the facilities are enlarged and advantage taken of the opportunities present, this county may not expect to add much to its annual output.

Production of Coal and Coke in Preston County.

NAME OF MINE.	Coal (tons of 2,240 lbs.).					Coke (tons of 2,000 lbs.).		
	Production.			Distribution.		First Six Months.	Second Six Months.	Total for Year.
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.	Quantity Shipped.	
Ansen.....	22,385	26,246	48,631	582	513	47,536	100,410	28,450
Tunnelton.....	47,500	53,200	100,700	290			13,383	
Kingwood.....	575	12,808	13,383				5,241	
Oakland.....	3,320	3,010	6,330	560	529			
Totals.....	73,780	95,264	169,044	1,432	1,042	47,536	119,034	28,450

This year Preston County produced a greater tonnage of coal than during any previous year. In 1890 the County produced 159,664 tons. In 1894 it had fallen to 39,936 tons. In 1897 it increased to 120,211 tons, and for the present year the production was 169,044 tons, becoming the eleventh county in point of production, whereas in 1897 it was thirteenth.

Production of Coal in Taylor County.

Name of Mine.	Coal (tons of 2,240 lbs.)						
	Production.			Distribution.			
	First six months.	Second six months.	Total for the year.	Used in operating the mine.	Sold to loc'l trade & tenants.	Used in coke ovens.	Quantity shipped.
Fabey	23,557	8,173	31,730	.....	.....	.....	31,730
Gates.....	12,138	106	12,244	.....	.....	.....	12,244
Flemingt'n	68,573	53,417	122,090	.....	250	.....	121,740
Tyrconnell	24,568	.....	24,568	.....	.....	.....	24,568
Totals....	128,836	61,696	190,532	.....	250	.....	190,282

The production has increased 12,135 tons over the previous year: the County holds tenth place in rank as a coal producing County and bids fair to become of greater importance.

Production of Coal and Coke in Tucker County.

NAME OF MINE.	Coal (tons of 2240 lbs.)					Coke (tons 2000 lbs.)		
	Production.		Distribution.			First Six Months.	Second Six Months.	Total for the Year.
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.	Quantity Shipped.	
Douglas No. 1.....	50,500	50,800	101,300	200	1,200	80,000	37,800	50,000
Douglas No. 2.....	5,500	6,500	12,000	150	50	.....	11,800	.....
Thomas Drift.....	138,503	118,110	256,613	2,466	1,696	13,245	239,236	8,830
Thomas Shaft.....	40,460	4,185	44,645	.....	.....	.....	11,915	.....
Coketon No. 1.....	48,629	57,624	106,253	.....	.....	.....	106,253	.....
Coketon No. 3.....	113,613	1,954	115,567	.....	.....	.....	1,954	.....
Coketon No. 2.....	41,477	107,786	221,389	55	1,186	173,838	46,075	115,891
Totals.....	429,682	541,326	991,003	2,971	5,600	81,811	16,577	54,540
		410,815	831,497	2,971	4,922	348,894	471,640	229,261
							106,756	122,506

This County ranks as the sixth in point of coal producing and third as a coke producing county, being the same as held the previous year. The production of coal is an increase of 183,831 tons over 1897, this increase alone being within 5,219 tons of the total production of the County in 1891. The increase in coke production is 69,419 tons.

The excellence of the quality of the coal and coke in this County bespeaks a constantly increasing output of the mines and ovens in this County.

Production of Coal and Coke in Kanawha County.

NAME OF MINE.	Coal (tons of 2240 lbs.)				Coke (tons 2000 lbs.)			
	Production.		Distribution.		Quantity Shipped.	First Six Months.	Second Six Months.	Total for the Year.
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tonnage.	Used in Coke Ovens.		
Graham.....	3,351	3,909	7,260	64	61	.....	.....	.....
Riley.....	103	103	206	.....	103	.....	.....	.....
Falling Rock.....	2,679	1,786	4,465	.....	.....	.....	.....	.....
Elk River.....	1,774	.....	1,774	.....	1,774	.....	.....	.....
Peacock.....	191	892	1,083	.....	11	.....	.....	.....
Quincy.....	7,500	.....	7,500	.....	107	.....	.....	.....
Campbell.....	20,500	41,962	62,462	318	302	.....	.....	.....
Spring Fork.....	26,507	53,032	81,539	505	296	.....	.....	.....
Charlmore.....	9,000	11,500	20,500	.....	.....	.....	.....	.....
Brablin.....	3,221	2,081	5,302	.....	.....	.....	.....	.....
Jens Creek.....	6,400	10,500	16,900	36	.....	.....	.....	.....
Big Black Band No. 1.....	4,776	11,902	16,738	.....	.....	.....	.....	.....
Big Black Band No. 2.....	.....	.....	.....	.....	.....	.....	.....	.....
North.....	38,080	45,550	83,630	683	686	.....	.....	.....
South.....	52,172	55,838	108,010	727	749	.....	.....	.....
Black Diamond.....	2,215	11,810	14,025	67	89	.....	.....	.....
Coalburg No. 3.....	18,521	26,356	44,877	.....	142	.....	.....	.....
Ronda.....	13,330	35,055	48,385	.....	290	.....	.....	.....
Keystone.....	*48,273	49,172	97,445	.....	.....	.....	.....	.....
Acme.....	13,447	15,400	28,847	.....	.....	.....	.....	.....
Peabody.....	15,205	9,830	25,035	.....	.....	.....	.....	.....
East Bank.....	12,857	9,643	22,500	120	1,135	1,286	.....	.....
Black Cat.....	10,102	11,381	21,483	178	178	.....	.....	.....
Monarch.....	13,323	17,854	31,177	.....	306	.....	.....	.....
Big Mountain No. 1.....	16,050	23,826	39,876	.....	297	.....	.....	.....
Big Mountain No. 2.....	485	2,050	2,535	.....	.....	.....	.....	.....
Cedar Grove.....	16,895	18,077	34,972	.....	514	.....	.....	.....
Staunton.....	15,642	14,731	30,376	67	581	.....	.....	.....
Anne.....	.....	.....	.....	.....	.....	.....	.....	.....
Kellys Creek*.....	8,000	9,000	17,000	.....	.....	.....	.....	.....
United.....	.....	.....	.....	.....	.....	.....	.....	.....

*Estimated.

Production of Coal and Coke in Kanawha County.—Continued.

NAME OF MINE.	Coal (tons of 2,240 lbs.)						Coke (tons of 2,000 lbs.)		
	Production.			Distribution.			First Six Months.	Second Six Months.	Total for the Year.
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.			
Virginia.....	2,064	12,926	14,990						
Riverside.....	13,658	27,511	40,569		696				
Belmont.....	17,653	31,701	48,754		900				
Crown Hill.....		719	719						
Chesapeake.....	41,325	76,015	120,540	356	656				
Union.....	2,128	17,458	19,586		228				
Consolidated.....	10,950	9,442	20,292	48	80				
No. 2 Gas.....	37,816	20,361	58,377	312	240	28,767	11,841	7,337	19,178
Cannelton.....	678	6,899	7,577						
Totals.....	514,714	698,402	1,213,116	3,866	9,835	33,653	11,841	9,737	21,578

With an increase of two shipping mines the production of coal increased 170,371 tons over 1897 and an increase of 1,446 tons of coke over the same year. This County retains fourth place as a coal producing County and becomes the seventh coke producing County, having lost sixth place to Preston County.

Production of Coal in Mason County.

NAME OF MINE.	Coal (Tons of 2,240 lbs.)					
	Production.			Distribution.		
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating Mine.	Sold to Local Trade and Tenants.	Quantity Shipped.
New Haven.....	31,811	28,041	59,852	1,692	1,626	56,584
Hartford.....	6,702	6,961	13,663	737	12,926	.....
Juhling.....	.....	9,097	9,097	.....	9,097	.....
Hope.....	5,065	7,512	12,577	.....	12,577	.....
Beach Grove.....	1,071	.....	1,071	43	.....	1,028
McDaniel.....	.....	2,528	2,528	.....	29	2,499
Clifton.....	394	.....	394	.....	108	286
Camden.....	7,481	2,541	10,022	.....	4,664	5,358
Totals.....	52,524	56,680	109,204	2,472	41,027	65,705

In 1897 this County produced 111,535 tons and for the present year 109,204 tons, a loss of 2,331 tons. This product comes principally from collieries dependent largely upon local markets, and has not shown the growth the opportunities afford. Mason is fourteenth in point of production.

Production of Coal in Putnam County.

NAME OF MINE.	Coal (tons of 2,240 lbs.)				
	Production.			Distribution.	
	First six months	Second six months	Total for the year	Sold to local trade & tenants	Quantity shipped
Plymouth.....	2,626	16,741	19,367	53	19,314
Florence.....	39,166	70,318	109,484	1,261	108,223
Pocatalico & Queen City.....	.....	.....	.....	.....	.....
Totals.....	41,792	87,059	128,851	1,314	127,537

With the loss of the product of one mine, suspended; the production of this County has decreased 2,671 tons under the production for 1897, and now stands thirteenth in point of production, whereas in 1897 it was twelfth.

Production of Coal and Coke in Fayette County.

NAME OF MINE.	Production.			Coal (tons of 2,240 lbs.).			Coke (tons of 2,000 lbs.).			
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.	Quantity Shipped.	First Six Months.	Second Six Months.	Total for the Year.
Eureka.....	3,294	7,074	10,368				10,368			
No. 5 Block.....	19,255	15,830	35,085	250			34,835			
Mecca.....	14,832	29,185	44,017	1,000	500		42,517			
Straughtan.....	8,309	7,925	16,235		425		15,800			
Crescent.....	9,691	27,233	36,921			16,025	20,299	3,392	7,368	10,760
No. 5 Block.....	20,074	30,037	50,111	1,350	1,400		47,361			
No. 1.....	6,389	17,422	23,811				23,811			
No. 2.....	2,479	3,701	6,180				3,701			
No. 5.....	21,141	19,171	40,312				40,312			
Eagle.....		2,981	2,981			2,981			1,500	1,500
St. Clair, No. 1.....	9,340	20,397	29,737			29,737		6,896	15,065	21,961
St. Clair, No. 2.....	7,317	11,318	18,635				18,635			
Forest Hill.....	2,197	2,197	4,394	23	10		2,161			
Diamond.....		11,865	11,865	236			11,629			
Harewood.....	2,317	1,636	3,953				3,913			
Boomer.....	19,531	19,531	39,062	22	22		39,018			
Vulcan.....	80,745		150,776	201	4,583	66,970	79,022	19,981	23,312	43,296
Gr- at Kanawha.....	27,130	39,900	67,030	300	1,000	24,925	40,805	4,995	11,709	16,704
Digby.....	6,035	15,265	21,300				21,320			
McDougal.....	2,250	1,500	3,750				3,750			
Gauley Mountain.....	191,222	198,667	389,889	509	738	59,342	329,300	19,943	21,528	41,471
Gaymont.....	13,000	12,000	25,000			9,000	16,000	4,000	2,000	6,000
Sunnyside.....	15,000	15,000	30,000		375	5,100	22,525	1,615	2,308	3,923
Elmo.....	1,326	6,752	8,078			150	7,958			
Fayette.....	24,659	23,153	47,812	245	410	7,931	39,226	2,672	2,286	4,958
Nuttallburg.....	35,918	34,818	70,736	500	1,500	29,736	39,000	9,200	9,200	18,400
Keeneys Creek.....	26,350	12,490	38,840		1,330		37,510			
Brown.....	18,350	31,701	50,051		361		31,400			
Boone.....	18,357	33,641	52,000	36	240		33,365			
Ballinger, No. 1.....	20,455	22,291	42,746		163		53,583			
Ballinger, No. 2.....	14,297	10,361	24,658				24,800			

Production of Coal and Coke in Fayette County.—Continued.

NAME OF MINE.	Coal (tons of 2,240 lbs.).					Coke (tons of 2,000 lbs.).			
	Production.					Distribution.			
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.	Quantity Shipped.	First Six Months.	Second Six Months.
Smokeless.....	19,722	14,996	34,718	.....	906	.....	33,818	.....	.....
Du Brac.....	23,682	19,687	43,369	100	.....	.....	12,869	.....	.....
Blaine.....	17,398	30,594	36	36	325	.....	30,253	.....	.....
Caperton.....	3,000	.....	3,000	.....	.....	.....	3,000	.....	.....
North Side.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Side.....	59,141	84,783	143,924	720	15,776	52,707	74,661	15,858	21,316
Harvey.....	35,558	25,558	71,116	1,100	500	56,309	13,297	17,973	35,947
Cunard.....	10,355	19,807	30,742	.....	360	.....	30,382	.....	.....
Finlow, or Brooklyn.....	13,314	18,113	31,427	80	300	37,061	40,389	11,114	13,816
Fire Creek.....	38,231	11,129	79,360	500	1,400	.....	7,425	5,300	12,925
Central.....	47,466	36,260	83,726	.....	1,200	20,100	62,426	3,527	4,667
Echo, Nos 1 and 2.....	29,311	23,070	62,981	400	800	12,686	49,095	752	9,920
Red Ash.....	25,582	60,732	96,314	.....	600	11,905	80,809	.....	.....
Rush Run.....	35,498	46,962	82,460	40	600	.....	81,820	.....	.....
Dimmock.....	29,612	29,315	49,957	200	500	.....	49,257	.....	.....
Thurmond.....	58,488	43,580	102,078	600	1,500	.....	99,978	.....	.....
Stone Cliff.....	37,496	35,350	72,856	100	3,476	14,125	55,151	3,141	6,237
Beechwood and.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keystone.....	59,863	43,913	103,776	700	960	4,460	97,656	1,728	1,728
Alaska.....	50,520	41,991	92,521	.....	1,200	3,670	87,651	253	2,217
Slater.....	6,186	9,415	15,601	300	.....	.....	15,301	.....	.....
Cliff Top.....	17,084	17,684	34,768	1,000	.....	31,368	.....	10,140	10,140
Star.....	52,560	45,977	98,537	500	500	.....	97,537	.....	.....
Collins.....	139,003	128,112	267,115	1,125	.....	55,381	210,609	18,972	17,918
Sun.....	13,490	72,291	85,781	700	.....	.....	71,591	.....	.....
Dunloop.....	35,000	40,000	75,000	.....	1,000	.....	74,000	.....	.....
Turkey Knob.....	54,000	51,000	105,000	350	1,450	.....	103,200	.....	.....
Macdonald.....	87,000	78,710	165,800	200	300	.....	165,300	.....	.....
Mt. Hope.....	55,000	30,000	85,000	100	900	.....	84,000	.....	.....
Quinnimont.....	22,084	23,085	45,169	200	100	31,721	13,148	9,521	12,819
Big Q.....	51,943	46,382	98,325	275	205	.....	97,845	.....	.....

Production of Coal and Coke in Fayette County.—Continued.

NAME OF MINE.	Coal (tons of 2,240 lbs).				Coke (tons of 2,000 lbs).			
	Production.			Distribution.			Total for the Year.	
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.		Quantity Shipped.
Robins.....	71,243	68,139	139,382	.....	.....	.....	139,382	.....
Laurel Creek.....	25,635	31,039	56,674	.....	250	.....	56,424	.....
Greenwood.....	70,304	81,326	151,630	.....	1,200	.....	150,430	.....
Totals.....	1,916,618	2,043,618	3,960,236	13,998	49,972	590,100	3,306,190	.....
								171,510
								222,512
								391,052

The production for the present year being 3,960,266 tons is an increase of 967,205 tons over the production for 1897. This increase is greater than the entire production of Tucker County for the present year. The growth of the mining industry in Fayette County is nothing short of phenomenal and it is the banner coal County in the State. The production of coke increased 64,963 tons over 1897, leaving the County second as a coke producer, a place it is likely to retain for several years.

Production of Coal and Coke in Raleigh County.

NAME OF MINE.	Coal (tons of 2,240 lbs.)					Coke (tons of 2,000 lbs.)		
	Production.		Distribution.			First six months.	Second six months.	Total for the year.
	First six months.	Second six months.	Total for the year.	Used in operating the mine.	Sold to local trade & tenants.	Used in coke ovens.	Quantity shipped.	
Royal.....	36,870	42,445	79,315	600	1,000	26,602	51,653	20,007
Totals.....	36,870	42,445	79,315	600	1,000	26,602	51,653	20,007

The production of this County comes from one mine only. The increase over 1897 is 15,614 tons of coal and 1,553 tons of coke. The relative position held by this County is the same as in 1897, that is, coal sixteenth and coke eighth.

Production of Coal in Mingo County.

NAME OF MINE.	Coal (tons of 2,240 lbs.)					
	Production.			Distribution.		
	First six months.	Second six months.	Total for the year.	Used in operating the mine.	Sold to local trade & tenants.	Quantity shipped.
Camp Branch.....	13,672	10,187	23,859	.....	.....	23,859
Pearl.....	8,833	3,103	11,936	.....	.....	11,936
Little.....	.....	1,011	1,011	.....	.....	1,011
Freeport.....	8,200	8,472	16,672	200	300	16,172
Alma.....	.....	.....	.....	.....	.....	.....
Logan Con.....	19,712	32,879	52,591	150	275	52,166
Maritime.....	45,665	34,285	79,950	.....	.....	79,950
Thacker.....	53,684	49,915	103,599	.....	1,000	102,599
Mingo.....	8,092	9,729	17,821	100	200	17,521
Lynn.....	16,813	16,963	33,776	150	150	33,476
Grapevine.....	21,183	20,573	41,756	.....	.....	41,756
Neil & Finn.....	.....	309	309	.....	.....	309
Totals.....	195,854	187,426	383,280	600	1,925	380,755

In 1897 this County held the eighth position as a coal producer with a tonnage of 267,789. This year it holds the same relative position with an increased tonnage of 115,491.

Production of Coal and Coke in McDowell County.

INSPECTOR OF MINES.

29

NAME OF MINE.	Production.				Distribution.				Coke (tons of 2,000 lbs.)			
	First six months.	Second six months.	Total for the year.	Used in operating the mine.	Sold to local trade & tenants.	Used in coke ovens.	Quantity shipped.	First six months.	Second six months.	Total for the Year.	Coke (tons of 2,000 lbs.)	
Tidewater.....	33,743	39,319	73,062	411	412	17,112	55,127	4,305	7,123	11,428		
Bottom Creek.....	34,101	39,630	73,731	276	289	18,845	54,264	2,308	7,428	11,536		
Peerless.....	51,030	55,079	106,109	.....	.....	30,319	53,790	7,402	13,188	20,590	
Empire.....	38,513	34,269	72,782	480	101	18,483	53,748	4,318	7,555	11,873		
Swawnee.....	43,253	56,381	99,634	1,200	1,200	35,890	61,336	6,096	16,336	22,432		
Eureka.....	48,515	52,785	101,300	.....	.....	40,078	61,229	12,534	16,287	28,821	
Pulaski.....	90,300	88,700	179,000	1,288	.....	93,038	84,651	33,067	31,111	64,178	
Keystone.....	36,537	41,896	78,433	400	400	21,116	56,457	4,461	8,512	13,003		
Algoma No. 1 & 2.....	85,224	82,000	167,224	1,400	3,000	57,300	105,621	19,313	19,313	38,626		
Gulliam.....	32,113	41,372	73,485	200	500	18,612	54,143	3,118	8,339	11,657		
Rofe.....	31,282	40,067	71,349	.....	495	21,009	52,975	4,784	9,222	14,006	
Roanoke.....	42,352	43,716	86,068	.....	601	33,166	52,501	11,997	12,770	24,767	
Indian Ridge.....	29,187	29,859	59,046	.....	.....	13,428	45,618	3,984	5,672	9,656	
Arlington.....	42,268	36,925	79,193	400	500	28,682	49,611	6,639	11,471	18,110		
Greenbrier.....	35,013	39,794	74,807	.....	.....	19,569	55,298	4,117	8,899	13,046	
McDowell.....	33,518	40,385	73,903	350	100	18,076	55,271	3,778	11,366	15,114		
Ashland.....	25,580	46,653	72,233	.....	452	19,281	42,700	2,000	8,739	10,739	
Elk Ridge.....	33,784	42,922	76,706	.....	.....	18,379	57,727	5,468	13,911	19,379	
Lynchburg.....	53,440	53,451	106,891	.....	.....	31,113	75,778	10,225	13,005	23,230	
Townshat.....	56,364	69,137	125,501	.....	.....	36,271	89,430	11,733	19,302	31,035	
Upland No. 1 & 2.....	83,426	88,802	172,228	313	859	62,701	108,325	22,623	24,053	46,676		
Houston.....	74,987	94,295	169,282	.....	1,500	12,182	125,250	8,608	17,450	26,558	
Crozer No. 1 & 2.....	131,112	133,294	264,506	.....	2,288	108,730	153,488	35,565	43,115	78,680	
Turkey Gap.....	106,809	103,790	210,539	.....	.....	94,807	115,612	31,247	28,060	59,307	
Lick Branch.....	35,850	46,375	82,425	600	600	46,825	34,400	12,635	18,835	31,470		
Shamokin.....	49,171	62,610	111,781	.....	765	27,498	83,518	6,627	13,910	20,537	
Elkhorn.....	33,687	62,304	123,191	600	2,013	38,425	82,133	8,837	18,066	26,903		
Norfolk.....	71,616	78,323	149,939	2,000	2,000	33,952	111,987	8,181	15,174	23,358		
Anglo.....	19,787	25,539	45,326	300	300	8,267	36,459	1,582	3,584	5,166		
Totals.....	1,506,177	1,677,352	3,183,529	10,248	18,375	1,054,374	2,100,532	299,185	432,469	731,654		

The increase of coal production over 1897 is 565,612 tons and of coke 164,611 tons. This the banner coke producing County and leads Fayette County by 337,629 tons. This County is destined to continue the lead in the production of coke. More coke was manufactured in this County the present year than was manufactured in the State in 1888.

As to the production of coal and coke in the County, the facilities are ample for increasing the tonage two fold without increasing the equipment at the collieries.

Production of Coal and Coke in Mercer County.

NAME OF MINE.	Coal (tons of 2,240 lbs.)				Coke (tons of 2,000 lbs.)			
	Production.		Distribution.					
	First Six Months.	Second Six Months.	Total for the Year.	Used in Operating the Mine.	Sold to Local Trade and Tenants.	Used in Coke Ovens.	Quantity Shipped.	Total for the Year.
Coaldale.....	76,980	87,482	164,462	.....	960	31,436	128,766	24,083
Millcreek or Sterling.....	59,700	59,848	119,548	.....	827	68,617	50,101	48,041
Klondike.....	2,500	1,400	6,650	.....	250	6,650	6,100	.....
Buckeye.....	47,000	48,302	96,022	.....	200	17,882	77,740	12,536
Caswell.....	96,715	97,347	194,062	312	1,608	28,111	161,031	20,984
Alliance.....	80,669	85,245	163,914	300	1,127	31,606	130,881	19,794
Louisville.....	31,421	41,399	73,730	.....	.....	21,120	51,610	11,082
Goodwill.....	32,432	36,839	69,291	220	252	11,571	57,248	9,581
Tochontas.....	115,000	.....	115,000	.....	.....	.....	115,000	.....
Totals.....	546,147	458,232	1,004,379	4,632	5,224	213,343	784,780	149,061

Since the opening of the mines in this County the production for four different years each exceeded one million tons of coal. In 1897 the production was 873,300 tons. Again the County has reached the million ton figures with over four thousand to spare, the increase over last year being 131,079 tons, leaving the County stand as the 5th in point of coal production. Mercer has changed places with Marion County and is now the fourth coke County in the State, having been fifth last year.

The increase over 1897 is 33,239 tons of coke.

CHAPTER IV.

Tons of Coal Used in Ovens, Tons of Coke Produced, Yield of Coke, Ovens in and out of Use, Average No. Ovens Operated, Days Active and Men Employed at Coke Ovens.

COUNTIES.	No. of Coke Plants Reported.	Total Tons of Coal Used in the Ovens (2000 lbs.)	Total Tons of Coke Produced. (2000 lbs)	Percentage of Yield.	Total No. of Coke Ovens Reported in Use.	Total No. of Coke Ovens Reported not in Use.	Average No. Ovens Operated During the Year.	Average No. of Days the Ovens were Operated	Average No. Men Employed at Ovens.	District.
Barbour.....	1	2,016	1,350	67.	10	.....	10	135	3	1
Harrison.....	1	10,115	5,419	53.6	22	113	22	150	10	1
Marion.....	8	262,756	149,060	57.5	840	12	409	247	173	1
Monongalia.....	2	22,093	12,337	56	50	.....	47	150	15	1
Preston.....	1	53,240	28,450	53.4	.....	60	80	311	25	1
Tucker.....	4	390,761	229,261	58.7	592	.....	588	295	284	1
Kanawha.....	12	37,620	21,578	58.3	102	.....	75	193	30	2
Fayette.....	22	660,912	394,052	57.8	1,742	62	1,597	275	570	3
Raleigh.....	1	29,794	20,007	67.2	78	.....	78	281	19	3
McDowell.....	29	1,180,899	731,681	61.1	3,758	.....	2,690	203	1,117	4
Mercer.....	7	238,944	149,061	62.3	893	.....	570	256	276	4
Taylor.....	.....	.....	.....	.....	.....	25	.....	.....	.....	1
Totals.....	78	2,888,550	1,742,256	60.3	8,170	272	6,166	238	2,522	.....

Total number of coke ovens in the State..... 8,442
 Average number of ovens operated during the year..... 6,166
 Average number of days operated during the year..... 238
 Average percentage of yield..... 60.3
 Tons of coke produced per oven in operation..... 282½

Table Showing the Number of Coke Ovens in the State Not in Use During the Year.

County.	Name of Company.	Number of Ovens Not in Use.	Field in Which Located.	Dist.
Preston	West End Coke Works.....	10	Up. Monongahela.....	1
"	Oakland C. & C. Co.....	50	" "	1
Harrison	Howard C. & C. Co.....	50	" "	1
"	Despard C. & C. Co.....	18	" "	1
"	Farnum C. & C. Co.....	29	" "	1
"	Pinnickinnick Coal Co.....	16	" "	1
Marion	Bryan & Loller.....	12	" "	1
Taylor.....	Newburg O. C. & C. Co.....	25	" "	1
Fayette.....	Wm. Beury, Cooper & Co.....	50	New River.....	3
"	Nuttallburg C. & C. Co.....	12	" "	3
	Total ovens not in use.....	272		

OVENS BUILDING IN THE STATE.

Preston	Oakland C. & C. Co.....	50	Up. Monongahela.....	1
Tucker.....	Davis C. & C. Co.....	40	Up. Potomac.....	1
Fayette.....	Long Acre Colliery Co.....	100	New River.....	3
	Total ovens building.....	190		

Pulaski Iron Co. is building additional ovens.

Table Showing the Increase in the Number of Coke Ovens in the State During the Year.

County.	Name of Company.	Increase in Ovens.	Field in which Located	Dist.
Preston	Oakland Coal & Coke Co.....	50	Up. Monongahela.....	1
Tucker.	Davis C. & C. Co.....	100	Upper Potomac.....	1
Kanawha..	Cannelton Coal Co.....	10	Kanawha.....	2
Fayette.....	Deitz-Masteron C. & C. Co	7	New River.....	3
"	New River Coke Co.....	15	" "	3
"	Echo Coal & Coke Co.....	50	" "	3
"	Red Ash Coal Co.....	*80	" "	3
"	Longdale Iron Co.....	4	" "	3
Mercer.....	Mill Creek C. & C. Co. (Coaldale)	3	Flat Top	4
Total increase.....		319	*Welsh ovens.	

OVENS DESTROYED DURING THE YEAR.

Marion	Clark C. & C. Co. (Prichard).....	12	Up. Monongahela.....	1
"	West Fairmont C. & C. Co. (N.E.)	2	" "	1
"	Montana C. & C. Co.....	1	" "	1
Total destroyed.....		15		

Net increase of ovens during the year, 304.

CHAPTER V.

Summary of the Production of Machine Mined Coal in the State, 1898.

County.	No. of firms using machines.	No. of machines used.	Production of machine mined coal (tons of 2240 lbs.)	No. of machine miners.	No. of machine miners and helpers.	Total machine men employed.	District in which located.	Remarks.
Marion.....	12	13	398,168	216	52	268	First.	Six machines idle. Recently installed.
Tucker.....	1	7	3,756	6	2	8	First.	
Marshall.....	1	2					First.	
Kanawha	1	25	96,831	175	50	225	Second.	
Mason.....	1	1	2,204	4	2	6	Second.	
Fayette.....	8	29	111,370	113	43	156	Third.	
Mingo.....	3	8	77,481	105	14	119	Fourth.	
McDowell	6	11	350,183	131	20	151	Fourth.	
Totals	28	96	1,070,293	750	183	933		
Totals 1896-97.	16	55	600,418	539	113	652		
1897-98 gain over 1896-97.....	12	41	469,875	211	70	281		

*Companies operating Mining Machines, and the quantity of
Coal Produced—1898.*

Name of County.	NAME OF COMPANY AND MINES.	No. of Machines.	Tons of Coal produced by Machines (2,240 lbs.)	No. of Machine Miners.	No. of Mach. run- ners & helpers.	Total No. of Ma- chine Men.	District.
Marion	West Fairmont C. & C. Co. (New Eng.).....	4	82,417	56	16	72	1
"	Monongah C. & C. Co.....	9	315,751	160	36	196	1
Tucker.....	Davis C. & C. Co. (Thomas Drift).....	7	3,756	6	2	8	1
Marshall....	Glendale Coal Co.....	2					1
Kanawha..	Campbells Creek Coal Co.....	5	41,768	40	12	52	2
"	Charlmore Coal Co.....	3	8,000	20	6	26	2
"	Winifrede Coal Co.....	5	6,825	25	10	35	2
"	Stevens Coal Co.....	5	19,246	20	6	26	2
"	Staunton Coal Co.....	3	11,438	30	10	40	2
"	Thomas-Scholz Coal Co.....	2	9,554	40	6	46	2
"	Kellys Creek Coal Co.....	12					2
Mason.....	Consumers C. & M. Co.....	1	2,204	4	2	6	2
Fayette.....	M. T. Davis & Co.....	4	35,085	13	6	19	3
"	The St. Clair Co.....	4	10,424	10	7	17	3
"	The Mt. Carbon Co., Ltd.....	4	22,605	10	4	14	3
"	The Gt. Kanawha Coll. Co.....	3	12,821	10	4	14	3
"	New River Mining Co.....	1					3
"	Brooklyn Coal Co.....	5	13,556	12	6	18	3
"	Red Ash Coal Co.....	6	31,894	43	12	55	3
"	Quinnimont Coal Co.....	2	14,985	15	4	19	3
Mingo.....	Pearl Coal Co.....	2	9,936	25	4	29	4
"	Logan Consolidated C. Co.	3	16,595	40	4	44	4
"	The Maritime Coal Co.....	3	50,950	40	6	46	4
McDowell..	Pulaski Iron Co.....	5	163,200	50	10	60	4
"	Upland C. & C. Co.....	2	99,002	40	4	44	4
"	Crozier C. & C. Co.....	12	13,301	6	2	8	4
"	Norfolk C. & C. Co. (Norfolk Coll.).....	1	49,080	15	12	17	4
"	Southwest Va. Imp. Co., Va.....	1	25,000	20	2	22	4
	Totals	96	1,070,293	750	183	933	

Number and Kind of Mining Machines in the State, 1897-1898.

COUNTY.	NAME OF COMPANY.	Number of Mine Machines.						REMARKS.	
		Jeffrey	Morgan-Gardner.	Link Belt.	General Electric.	Bevy	Sullivan. Harrison.		Total.
Marion	West Fairmont C. and C. Co.....	4	.....	.....	.....	.....	.....	4	.....
Marion	Monongah C. and C. Co.....	1	.....	.....	.....	.....	.....	1	.....
Marshall	Glendale Coal Co.....	.....	12	.....	.....	.....	.....	12	.....
Tucker	Davis C. and C. Co.....	.....	.....	.....	.....	.....	.....	.....	Only 1 used during year.
Kanawha	Campbells Creek C. Co.....	5	.....	.....	.....	.....	.....	5	.....
Kanawha	Charlmore Coal Co.....	3	.....	.....	.....	.....	.....	3	.....
Kanawha	Winifrede Coal Co.....	.....	.....	3	.....	.....	.....	3	.....
Kanawha	Stevens Coal Co.....	5	.....	.....	.....	.....	.....	5	.....
Kanawha	Staunton Coal Co.....	.....	.....	.....	.....	.....	.....	.....	.....
Kanawha	Thomas-Scho'z Coal Co.....	.....	.....	.....	.....	.....	.....	.....	.....
Kanawha	Kellys Creek Co 1 Co.....	.....	.....	.....	.....	.....	.....	.....	.....
Mason	Consumers Coal and Mining Co.....	1	.....	.....	.....	.....	.....	1	.....
Fayette	M. T. Davis & Co.....	4	.....	.....	.....	.....	.....	4	.....
Fayette	The St. Clair Co.....	4	.....	.....	.....	.....	.....	4	.....
Fayette	The Mt. Carbon Co., Limited.....	1	.....	.....	.....	1	2	4	.....
Fayette	The Great Kanawha Colliery C.....	3	.....	.....	.....	.....	.....	3	.....
Fayette	New River Mining Co.....	.....	.....	.....	.....	1	.....	1	.....
Fayette	Brooklyn Coal Co.....	.....	.....	.....	.....	.....	5	5	.....
Fayette	Red Ash Coal Co.....	.....	.....	.....	.....	.....	6	6	.....
Fayette	Quinnimont Coal Co.....	.....	.....	2	.....	.....	.....	2	.....
Mingo	Pearl Coal Co.....	12	.....	.....	.....	.....	.....	12	.....
Mingo	Logan Consolidated.....	3	.....	.....	.....	.....	.....	3	.....
Mingo	The Maritime Coal Co.....	3	.....	.....	.....	.....	.....	3	.....
McDowell	Pulaski Iron Co.....	5	.....	.....	.....	.....	.....	5	.....
McDowell	Upland Coal Co.....	2	.....	.....	.....	.....	.....	2	.....
McDowell	Crozer Coal and Coke Co.....	12	.....	.....	.....	.....	.....	12	.....
McDowell	Norfolk C. and C. Co.....	.....	.....	1	.....	.....	.....	1	.....
McDowell	Southwest Va. Improvement Co.....	1	.....	.....	.....	.....	.....	1	.....
	Totals.....	49	19	6	7	1	13	96	.....

CHAPTER VI.

Wages Paid and Selling Price of Coal and Coke.

The following table exhibits the prices paid the miners per ton of 2,240 lbs. for run-of-mine coal; the wages paid trackmen and the selling price per ton of coal and coke on board the railroad cars at the mine and ovens, by counties:

County.	Paid miners per ton 2,240 lbs.	Trackmen's daily wages.	Selling price of	
			Coal (ton of 2,240 lbs.).	Coke (ton of 2,000 lbs.)
Barbour.....	\$.331 $\frac{1}{3}$	\$ 1.41 $\frac{1}{2}$ $\frac{2}{3}$	\$.55	\$ 1.10
Brooke.....	.47	1.67 $\frac{1}{2}$	.67	.....
Hancock.....	.49	1.60	.85	.....
Harrison.....	.32	1.47	.54	1.10
Marion.....	.321 $\frac{1}{2}$	1.57	.55	1.02
Marshall.....	.441 $\frac{1}{2}$	1.77	.58	.....
Mineral.....	.301 $\frac{1}{2}$	1.91	.76	.....
Monongalia.....	.30	1.50	.45	.97 $\frac{1}{2}$
Ohio.....	.461 $\frac{1}{3}$	1.42	.71	.....
Preston.....	.321 $\frac{1}{2}$	1.31	.66	1.25
Taylor.....	.28	1.42	.47	.....
Tucker.....	.34	1.82	.69	1.42
Kanawha.....	.40 $\frac{3}{4}$	1.68	.71	.....
Mason.....	.48	1.46	.90	.....
Putnam.....	.37	1.57	.70	.....
Fayette.....	.37	1.67	.72	1.54
Raleigh.....	.45	2.00	.87	1.50
Mingo.....	.44	1.48	.64	.....
McDowell.....	.29	1.67	.61	1.16
Mercer.....	.25	1.74	.63	1.15
Average.....	\$.3394	.....	\$ .6595	\$ 1.14

While the price paid miners was only 74 mills per ton greater than for the year previous it must be observed that the selling price of both coal and coke was less, coal four and coke eleven cents less per ton than during 1897. This is accounted for by reason of the coal operators having made contracts for a year's shipment during the stringent market prices prevailing in April, 1897.

In discussing the prices paid for mining coal in the State it must be brought to attention that no fixed rate prevails throughout the counties of the State. The coals in the different counties are unlike in hardness and thickness, and in many places the roof is an important factor in regulating prices. The majority of the operators of mines pay by the mine car. These cars vary in size from one to three tons capacity. At few of the operations within the State is the coal weighed before or after screening.

The practice of screening for the purpose of weighing is on the decline in this State.

CHAPTER VII.

Railroad and River Transportation of Coal and Coke.

The tonnage of coal handled by the railroads within the State during the year was 13,277,182 tons of coal, and 1,968,008 tons of coke. The tons of coal, including that manufactured into coke, shipped by river from mines on the Great Kanawha were 784,000, being 64,000 tons less than that shipped by river during 1897. This is the least tonnage on the Great Kanawha since 1886, when it amounted to 714,465 tons.

Statement of Number of tons of Coal, including that Manufactured into Coke, Shipped by River from Mines on the Great Kanawha, for the Several Years Named, Ending June 30th.

Year	Tons of 2,000 lbs.	Year	Tons of 2,000 lbs.
1875	161,932	1889	1,076,872
1876	200,962	1890	966,462
1877	207,346	1891	1,030,454
1881	385,148	1892	1,071,511
1883	614,818	1893	919,320
1884	736,843	1894	1,032,840
1885	712,493	1895	879,304
1886	714,465	1896	922,000
1887	929,335	1897	848,600
1888	804,025	1898	784,000

Statement of the Tonnage of Coal and Coke from the Collieries in W. Va. handled and transported by the Railroads in the State during the twelve months ending June 30th, 1898.

[Quantities are expressed in tons of 2,000 lbs.]

Name of Railroad Co.	Total tons of Coal handled.	Total tons of Coke handled.	Tons originating on the line.		Tons delivered to the line by other railroads in West Virginia.		Tons delivered to other lines in West Virginia.		Tons of W. Va. fuel consumed by the line in State.		Railroads and docks to which the product is delivered for distribution.	Points of destination of the Product.	
			Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.		East.	West.
Baltimore & Ohio.....	2,564,190	338,827	908,116	89,821	1,396,674	218,996			285,735		Locust Point, W. & L. E., C. & W. Sandusky	Philadelphia, Baltimore, Tidewater P's	Lake ports, Northwest, Chicago.
Monongahela River.....	489,000	60,000	830,100	60,000			830,000	60,000			B. & O. R. R. Fairmont and Clarksburg	Do.	Do.
W. Va. & Pittsburg.....	36,360	91	34,925		1,377	94	8,468		428,132	94	B. & O. R. R. & Along R. R. R. at Clarksburg.		Ohio cities.
W. Va. C. & Pgh.....	1,258,069	230,294	1,211,776	230,294	16,293		86,549	15,462	58,999		B. & O. R. R. & Pa. R. R.	Tidewater P's. New England States & Mexico	Lake ports and others.
Kanawha & Michigan.....	425,291	29,175	363,599	19,174	61,792	9,999					P. & O. C. west, C. & O. east, Tol'do, N. News	Tidewater Points.	Tol., Mich., Ohio, Ind., Ill. points.
Norfolk & Western.....	3,440,175	899,521	3,439,529	899,296	646	238	6,808	136			C. H. & T., C. S. & H. L. P., Va., T. & S. d'ks. N. & W.	Tidew. & F. p's A. C. cities, Va. N. & S. Carolina W. U. cities	Cin., Chi., L. points & W. U. cities
Chesapeake & Ohio.....	4,783,657	410,096	4,562,728	410,096	190,319		54,460				Newport News, K. & M. Ry., Toledo.	Atlantic Coast and inland points.	Cincinnati Louisville Chicago.
Totals.....	13,277,182	1,968,008											

*Not included in total coal handled. †For Calendar year 1897. ‡Of this amount 19,575 tons were used by locomotives alone.

CHAPTER VIII.

Powder Used at the Mines and the Cost of Same.

A second attempt has been made to ascertain the quantity of powder consumed in the mines in the State, but the results are very unsatisfactory, since only 50 per cent. of the operators reported the powder used at their mines. In comparing the returns with those of last year it is found that in a number of counties the quantity of powder used appears to have been guessed at, since the tons produced per keg used are widely different. Last year each keg in Marion County produced 58.1 tons and this year 90 tons of coal; in Fayette County last year, 99.2 tons and this year 109 tons of coal were produced by the use of one keg of powder.

In the mining of 13,747,722 tons of coal there were used the past year 146,086 kegs of powder—equivalent to 1826 tons. This is an increase of 12,153 kegs over last year and an increase of 2,649,914 tons of coal. The average tons produced per keg of powder used increased, being 94.1 against 91.4 for 1897; and the cost of the powder to the miners increased 14 cents on the keg, the powder last year selling at \$1.63 and this year \$1.77. In those counties where a record of the powder consumed is closely kept it is quite noticeable that there is a falling off in the tons of coal which a keg of powder dislodges. In Barbour County there is a falling off of 2.4 tons; in Tucker County, 10.1 tons; McDowell, 3.2; Mercer, 6.1 tons. The subjoined table gives the number of kegs of powder burned in each county, with the total tons of coal produced; the tons won for each keg of powder burned, and the price of the powder per keg to the miner.

Table Showing the Quantity of Powder Used at the Mines in the State, Coal Produced per Keg Used, and Price of Powder to the Miners.

NAME OF COUNTY.	No. of operators which reported.	Tons of coal produced by those which reported.	Tons of coal produced by those which did not report.	No. kegs powder reported used.	No. kegs powder used by those not reported — estimated.	Total No. kegs powder used.	Tons coal produced per keg of powder used.	Cost of powder per keg to miners.
Barbour.....	3	48,609	.....	500	.....	500	95.1	\$ 1.71
Brooke.....	3	56,793	.....	405	.....	405	140.0	1.66
Hancock.....	1	2,499	40,371	75	1,223	1,298	33.0	1.40
Harrison.....	3	90,656	180,898	919	1,827	2,746	98.6	1.68
Marion.....	6	433,411	1,296,184	4,815	14,291	19,106	90.0	1.72
Marshall.....	3	153,999	11,875	1,200	93	1,293	128.0	1.61
Mineral.....	2	168,611	340,743	600	.....	600	172.0	1.75
Mouongalia.....	1	50,993	17,874	360	127	487	141.0	1.70
Ohio.....	2	56,142	10,770	802	582	1,384	70.0	1.52
Preston.....	3	155,661	13,383	2,095	180	2,275	74.0	1.58
Taylor.....	3	166,064	24,468	622	92	714	266.0	1.41
Tucker.....	7	831,497	.....	11,087	.....	11,087	75.0	1.90
Kanawha.....	19	587,533	625,583	7,700	8,231	15,931	76.0	1.93
Mason.....	7	100,107	9,097	2,655	240	2,895	38.0	1.70
Putnam.....	1	19,367	109,484	500	2,880	3,380	38.0	1.75
Fayette.....	31	2,268,543	1,691,723	20,747	6,345	27,092	109.0	2.12
Raleigh.....	1	79,315	.....	700	.....	700	113.0	2.25
Mingo.....	6	266,215	117,065	2,967	1,590	4,557	90.0	2.00
McDowell.....	27	2,829,197	854,332	32,624	4,120	36,744	86.0	2.00
Mercer.....	7	882,729	121,650	11,582	1,600	13,182	76.0	2.00
Totals.....	136	9,182,965	4,971,900	102,955	43,131	146,086	94.1	\$ 1.77

*Produced without the aid of powder.

Average number of tons of coal produced per keg 94.1
 Average price per keg of powder to miners.....\$1.77

CHAPTER IX.

Improvements made at the Coal Mines in the State During the Year, as reported by the Mine Operators, are here Tabulated for ready Reference.

1897-98.

COUNTIES.	Fans.	Furnaces.	Air Stacks.	Steam locomotives.	Electric locomotives.	Electric generators.	Electric haulage.	Power House.	Mining Machines.		Oke Ovens.	Wall built at ovens.	Pumps.	Tunnements.	Tipples.	Additional Openings.	Bins.	Elevators.	Rope Haulage.	Inclines.	Engine House.	Boilers.	Office.	Coal Washers.	Drum Houses.	Store Houses.	Blacksmith shop.	Pushers.	Hutes.	Tramroads.	Lump and nut coal plants.	Conveyers.	Side Tracks.	
									Electric.	Compresses.																								
Barbour.....	7	4	2	5	1	6	7	9	16	1	100	1	4	48	15	15	3	5	7	9	6	1	4	1	4	2	5	4	1	2	2	1	6	
Harrison.....																																		
Marion.....								1																										
Marshall.....																																		
Ohio.....																																		
Preston.....		1	1																			1												
Taylor.....																																		
Tucker.....	1																																	
Kanawha.....	4																																	
Mason.....		1	1																															
Putnam.....		1																																
Fayette.....																																		
Mingo.....	1																																	
McDowell.....	1																																	
Mercer.....																																		
Totals.....	7	4	2	5	1	6	7	6	9	16	1	100	1	4	48	15	15	3	5	7	9	6	1	4	1	4	2	5	4	1	2	2	1	6

CHAPTER X.—STRIKES.

On July 4th, 1897 a general strike of the bituminous coal miners of the States was inaugurated. To a limited extent this strike was participated in by the miners of this State. The strikers in West Virginia quit work largely through sympathy for the miners in the adjoining States, where the miners were waging a contest for increased wages, etc. In this State 5,488 men were affected, losing 336,909 days of labor and suffering a loss of \$505,363.00 in wages. Table A following will give this strike in detail.

On April 1st, 1898 a second effort was made to have the miners strike, with the result that 1,507 men were affected, causing a loss of 26,475 working days at a loss to the miners of \$39,712.50 in wages. See table B for the details of this and miscellaneous strikes.

Strike of Miners During 1897, Showing Extent, Men Engaged, Days of Labor Lost and Wages Lost by Those Engaged.

SUMMARY.—TABLE A.

County.	No. of Men Engaged.	Days Lost by One Man.	Loss in Wages at \$1.50 per Day.
Barbour	55	1,650	\$ 2,475 00
Harrison	170	9,020	13,530 00
Monongalia	50	3,000	4,500 00
Marion	648	30,412	45,618 00
Marshall	212	8,987	13,480 50
Ohio	52	4,004	6,006 00
Preston	80	560	840 00
Taylor	50	150	225 00
Kanawha	2,370	153,397	231,595 50
Mason	28		
Fayette	1,697	122,449	183,673 50
Mingo	76	2,280	3,420 00
Totals	5,488	336,909	\$ 505,363 00

Miscellaneous Strikes During 1898.

SUMMARY.—TABLE B.

Mason	170	5,125	\$ 7,687 50
Marshall.....	136	4,210	6,315 00
Ohio	52	3,900	5,850 00
Kanawha	761	11,035	16,552 50
Fayette.....	235	1,899	2,848 50
Tucker.....	153	306	459 00
Totals	1,507	26,475	\$ 39,712 50

CHAPTER X.

Coal Miners' Strikes During the Year Ending June 30th, 1898.—Table A general strike.—Table B miscellaneous strikes.

TABLE A.—Strike.

COUNTY.	Name of Company.	Strike Begun	Continued Until	Total Days Idle	No. men engaged.	Days lost by one laborer.	Loss in wages \$1.00 per day.	Cause of Strike	How Strike Was Settled.
1 Barbours.....	Junior Coal Co.....	July 1, 1897	Aug. 1, 1897	30	55	1,650	\$ 2,475 00	Miners claim short in weight.	Restoring shortage.
2 Harrison.....	Glen Falls C. & C. Co.....	Aug. 1, "	Oct. 18, "	78	40	3,120	4,080 00	Comp. strike for O. & P. miners	Strike dec. off by U. M. W. A.
3 " "	Howard C. & C. Co.....	Aug. 2, "	Aug. 12, "	10	80	1,200	1,200 00	do	Men returned at for. rate.
4 " "	Despard Gas C. Co.....	Aug. 1, "	Nov. 11, "	102	30	3,000	7,650 00	do	do do do
5 Monongalia.....	Mason Coal & Coke Co.....	July 5, "	Sept. 7, "	60	50	3,000	4,500 00	do	do do do
6 Marion.....	Palatine Coal Co.....	July 20, "	Sept. 20, "	60	32	1,920	2,880 00	do	do do do
7 " "	Newburg Orrel Coal Co.....	July 21, "	Oct. 1, "	72	36	2,592	3,888 00	do	do do do
8 " "	Va. & Pitts. C. & C. Co.....	July 21, "	Sept. 1, "	40	300	1,200	1,800 00	Men demanded recogn. of order	Men returned at for. rate.
9 " "	Monongah C. & C. Co.....	July 19, "	Sept. 1, "	42	450	1,800	2,350 00	Sympathy for O. & P. miners....	New men employed.
10 " "	Worthington C. & C. Co.....	July 4, "	Sept. 1, "	58	100	5,800	7,700 00	do	do do do
11 Marshall.....	Boggs Run M. & Mig. Co.....	Aug. 7, "	Sept. 16, "	40	65	2,600	3,900 00	do	do do do
12 " "	Glendale Coal Co.....	July 5, "	Sept. 15, "	42	76	3,192	4,788 00	do	do do do
13 " "	Moundsville Coal Co.....	July 5, "	Sept. 15, "	42	71	3,195	4,792 50	For 61 cts. net toll.	Compromised at 56 cts.
14 Ohio.....	Richland Coal Co.....	July 4, "	Sept. 20, "	77	52	4,004	6,006 00	Sympathy for O. & P. miners....	Strike dec. off by U. M. W.
15 Preston.....	Austin Coke Works.....	Aug. 10, "	Aug. 17, "	7	80	560	840 00	Demand for increase in wages.	Resumed at former rate.
16 Taylor.....	Grafton Coal & Coke Co.....	July 5, "	July 8, "	3	150	150	225 00	Sympathy for other strikers....	do at former do
17 Kanawha.....	Campbell's Creek Coal Co.....	Sept. 2, "	Oct. 14, "	40	155	6,200	9,300 00	do	do at less do
18 " "	Charlmore Coal Co.....	Sept. 2, "	Oct. 14, "	40	122	4,880	7,320 00	do	do at less do
19 " "	Len's Creek C. & C. Co.....	Aug. 4, "	Sept. 1, "	27	53	891	1,336 50	do	do at former do
20 " "	Big Black Band Coal Co.....	Aug. 14, "	Oct. 15, "	60	60	3,600	5,400 00	do	do at 5 cts. less rate
21 " "	" " " " " " " " " "	Aug. 16, "	Aug. 24, "	8	42	336	504 00	do	do at former rate.
22 " "	Winfrede Coal Co.....	Sept. 9, "	Nov. 1, "	50	42	2,100	3,150 00	Demand for increase & re. ogn.	Checked weigh. & 5 cts less rate
23 " "	Robinson Coal Co.....	Aug. 14, "	Oct. 15, "	60	180	10,800	16,200 00	Sympathetic....	Resumed at former rate.
24 " "	Coalburg Colliery Co.....	July 16, "	Oct. 28, "	74	115	10,730	16,095 00	Ref. to work for 2 1/2 cts. per bu.	do at 24 cts.
25 " "	Stevens Coal Co.....	Aug. 7, "	Nov. 1, "	83	87	7,221	10,831 50	Sympathetic....	do at former do
26 " "	" " " " " " " " " "	Sept. 1, "	Sept. 26, "	25	97	2,425	3,637 50	do	do at former do
27 " "	Peabody Coal Co.....	Sept. 1, "	Oct. 15, "	48	18	126	189 00	do	do at former do
28 " "	McCallister & Co.....	Aug. 8, "	Oct. 31, "	68	64	4,352	6,528 00	do	do at 1 1/4 ct. bu. adv
29 " "	" " " " " " " " " "	July 4, "	Oct. 31, "	100	35	3,500	5,250 00	Demand advance in wages....	do at former rate.
30 " "	Kanawha Splint Coal Co.....	July 13, "	Oct. 15, "	100	100	10,000	15,000 00	Sympathetic....	do

Coal Miners' Strikes During the Year Ending June 30th, 1898.—Table A, General Strike.—Table B, Miscellaneous Strikes.

TABLE A.—Strikes.

No.	COUNTY.	Name of Company.	Strike Began	Continued (until)	Total Days Idle	No. Men Engaged.	Days Lost by Laborer.	Loss in Wages, \$1.00 per Day.	Cause of Strike.	How Strike was Settled.
31	Kanawha	Monarch Coal Co.	Aug. 8, 1897	Nov. 1, 1897	85	48	7,221	\$10,823.50	Sympathetic.	Resumed at 1/4c. less.
32	"	Big Mt. Mining Co.	July 15, "	Oct. 15, "	90	100	9,810	11,715.00	do	do at former rate.
33	"	Stanton Coal Co.	Aug. 7, "	Oct. 7, "	60	71	4,110	6,660.00	Demanded Advance.	do at former do
34	"	Thomas-Schoz Coal Co.	Aug. 17, "	Oct. 4, "	47	15	2,115	3,172.50	do	do at former do
35	"	Riverside Coal Co.	July 25, "	Oct. 16, "	80	125	10,000	15,060.00	Sympathetic.	do at former do
36	"	Belmont Coal Co.	July 15, "	Oct. 25, "	102	125	12,750	19,125.00	do	do at 1/4c. advance.
37	"	Chesapeake Mining Co.	July 15, "	Oct. 25, "	101	225	23,000	35,100.00	do and advance.	do at former rate.
38	"	Montgomery Coal Co.	July 11, "	Oct. 27, "	105	150	15,750	23,625.00	do	do at 1/4c. less.
39	"	Channelton Coal Co.	Aug. 8, "	Oct. 21, "	45	250	1,750	2,625.00	Demand for advance & recogni.	Given recogn't'n & 1/2c. adv.
40	Mason	Hartford City Salt Co.							do	Resumed at advance.
41	Fayette	M. T. Davis & Co.	Aug. 9, "	Dec. 16, "	125	46	5,750	8,625.00	Sympathetic.	do at former rate.
42	"	M. T. Davis & Co.	Aug. 9, "	Oct. 28, "	80	70	5,650	8,100.00	do	do at former do
43	"	Carver Brothers	Aug. 1, "	Nov. 1, "	90	103	9,270	13,905.00	Demand for advance.	do at former do
44	"	W. R. Johnston (res. Gas)	Aug. 7, "	Dec. 6, "	119	106	12,611	18,921.00	Sympathy	do at 5c. less.
45	"	Carver Brothers	Aug. 6, "	Nov. 20, "	105	121	13,020	19,250.00	do	do at former rate.
46	"	Carver Brothers	Aug. 6, "	Nov. 20, "	105	66	6,930	10,265.00	do	do at 42 cts.
47	"	The St. Clair Co.	Sept. 20, "	Dec. 8, "	77	74	5,698	8,317.00	do	do at former rate.
48	"	The St. Clair Co.	Aug. 12, "	Nov. 1, "	79	63	5,451	8,176.50	do	do at 7c. less.
49	"	W. R. Johnston & Co.	Aug. 12, "	Nov. 1, "	79	21	1,896	2,844.00	do	do at former rate.
50	"	W. R. Johnston (No. 5 Bk)	Aug. 7, "	Nov. 4, "	87	105	9,135	13,702.50	do	do at former do
51	"	Great Kanawha Coll. Co.	Aug. 12, "	Dec. 15, "	123	150	18,150	27,675.00	Demand of advance.	do at former do
52	"	Great Kanawha Coll. Co.	Aug. 12, "	Dec. 15, "	123	61	7,872	11,808.00	do	do at former do
53	"	Rothwell Coal Co.	July 5, "	Oct. 5, "	30	33	90	135.00	Sympathetic.	do at former do
54	"	New River Coal Co.	Aug. 25, "	Oct. 1, "	36	155	4,860	7,290.00	do	do at former do
55	"	Cumard Coal Co.	Aug. 18, "	Sept. 22, "	33	55	1,815	2,722.50	do	do at former do
56	"	Brooklyn Coal Co.	Aug. 28, "	Sept. 22, "	22	50	1,298	1,947.00	do	do at former do
57	"	Echo Coal & Coke Co.	Aug. 18, "	Sept. 18, "	30	152	4,560	6,810.00	do	do at former do
58	"	Red Ash Coal Co.	Aug. 27, "	Sept. 1, "	30	168	5,040	7,560.00	do	do at former do
59	"	Rush Run C. & C. Co.	Aug. 20, "	Sept. 15, "	25	121	3,100	4,650.00	do	do at former do
60	Mingo	Logan Consolidated C. Co.	July 5, "	Aug. 5, "	30	76	2,280	3,420.00	Sympathetic.	Influx of new men.

CHAPTER X.—Continued.

Coal Miners' Strikes During the Year Ending June 30th, 1898.—Table A general strike.—Table B miscellaneous strikes.

TABLE B.—Strike.

COUNTY.	Name of Company.	Strike Begun	Continued Until.	Total days idle	No. men engaged	Days Lost by One Laborer	Loss in Wages \$1.50 per Day.	Cause of Strike.	How Strike was Settled.
61 Mason.....	Consumers C. & M. Co.....	Nov. 25, 1897	Jan. 1, 1898	35	145	5,075	\$ 7,612.50	Dema'd'g recog'n as organizat'n	Resumed at old terms.
62 Marshall.....	Boggs Run M. & Mfg. Co.....	April 1, 1898	May 3, "	32	65	2,080	\$3,120.00	demanding Chicago scale.....	Demand granted.
63 ".....	Moundsville Coal Co.....	" 1, "	" 1, "	30	71	2,130	3,195.00	demanding 60 cents.	Resumed at former rate.
64 Ohio.....	Richland Coal Co.....	" 1, "	June 21, "	75	52	3,900	5,850.00	Demand'd Chicago agreement.	Compromised
65 Kanawha.....	Big Black Band Coal Co.....	" 1, "	April 11, "	10	42	420	630.00	Demand'd 8 hours per day.....	Resumed at 10 hours.
66 ".....	Robinson Coal Co.....	Mch. 31, "	" 12, "	12	145	1,740	2,610.00	Sympathetic.....	"
67 ".....	Big Mt. Mining Co.....	April 1, "	May 1, "	30	109	3,270	4,905.00	demand'd Chicago agreement.	Resumed at former rate.
68 ".....	Thomas Scholz Coal Co.....	Mch. 15, "	Mch. 27, "	12	45	1,350	810.00	jected to intro'd'g machines.	Machines inst'led, old rate
69 ".....	".....	April 1, "	April 8, "	7	45	1,350	472.50	Demand'd 10 per cent. advance	Resumed at former rates.
70 ".....	Riverside Co.....	" 1, "	" 19, "	18	125	3,375	5,062.50	" 10 per cent.	"
71 ".....	Montgomery Coal Co.....	" 1, "	" 11, "	10	250	3,750	5,550.00	Chicago agreement.....	"
72 Mason.....	Hope Salt & Coal Co.....	" 1, "	" 3, "	2	25	50	75.00	Dem'd advance 10c per 100 lb.	Advance granted.
73 Fayette.....	W. R. Johnston (Cres Gas).....	" 1, "	" 10, "	9	106	954	1,431.00	Chicago scale agreement.....	Resumed at former rate.
74 ".....	" (No. 5 B.).....	" 1, "	" 10, "	9	105	945	1,417.50	"	"
75 ".....	W. R. Johnston & Co (Har.).....	Feb. 1, "	April, "	21	153	2,295	3,442.50	Order U. M. Workers of America	"
76 Tucker.....	Davis C. & Co No. 2 Coal Co.....	Mch. 24, "	Mch. 26, "	2	153	2,295	459.00	Driver disch.—dem'n'd reinstat	Discharged all concerned.

CHAPTER XI.

Explosions of Gas and Powder.

During the year there was one gas explosion in Fayette County resulting in the death of one person.

In McDowell County a powder explosion in the mine resulted in the death of one man.

In Marshall County a slight gas explosion at the Boggs Run mine resulted in the non-fatal burning of five men.

One man was non-fatally burned by powder explosion in a mine in Marion County, two men in Tucker County and one man in McDowell.

Gaseous Mines.

The following mines in the State have been reported to produce explosive gas at times:

Marion County.

West Fairmont Shaft, operated by the West Fairmont Coal & Coke Co.

Gaston, operated by the Gaston Gas Coal Co.

Worthington, “ Worthington Coal & Coke Co.

Marshall County.

Bogge Run, operated by the Boggs Run Mining & M'fg. Co.

Glendale Shaft, “ Glendale Coal Co.

Moundsville Shaft, “ Moundsville Coal Co.

Fayette County.

Star, operated by the Star Coal & Coke Co.

Sun, “ Sun Coal & Coke Co.

Rush Run, “ Rush Run Coal & Coke Co.

Red Ash, “ Red Ash Coal & Coke Co.

McDowell County.

Tidewater, operated by the Tidewater Coal & Coke Co.

Empire “ Empire Coal & Coke Co.

Keystone, “ Keystone Coal & Coke Co.

CHAPTER XII.

The following table gives the number of men employed in the mines, outside of the mines and at the coke ovens by counties:

COUNTY.	Number of Mines.	Coke Plants.	Days Mines Worked.	Days Ovens Worked.	Men Employed.						
					Pick Miners.	Machine Miners.	Machine runners and Helpers.	Others Inside of Mines.	Outside Day Hands.	On Coke Ovens.	Total No. Men Employed.
Barbour.....	3	1	172	155	86	.....	.....	4	5	3	98
Brooke.....	3	.....	225	.....	112	.....	.....	11	10	.....	133
Hancock.....	3	.....	100	.....	69	.....	.....	16	12	.....	97
Harrison.....	15	1	191	150	371	.....	.....	67	49	10	497
Marion.....	17	5	256	247	1,160	216	52	280	223	173	2,104
Marshall.....	4	.....	209	.....	174	.....	.....	37	37	.....	249
Mineral.....	7	.....	276	.....	454	.....	.....	57	40	.....	552
Monongalia.....	2	2	260	150	75	.....	.....	13	9	15	112
Ohio.....	6	.....	231	.....	130	.....	.....	27	15	.....	172
Preston.....	4	1	297	311	198	.....	.....	23	33	25	279
Taylor.....	4	.....	119	.....	257	.....	.....	34	35	.....	326
Tucker.....	8	4	285	295	759	6	2	185	50	281	1,286
Kanawha.....	44	2	188	193	1,833	175	50	462	296	30	2,836
Mason.....	8	.....	235	.....	200	4	2	49	29	.....	284
Putnam.....	4	.....	183	.....	270	.....	.....	58	58	.....	386
Fayette.....	68	22	199	275	4,802	113	43	1,234	623	570	7,385
Raleigh.....	1	1	158	281	95	.....	.....	25	17	19	156
Mingo.....	12	.....	211	.....	329	105	14	149	76	.....	673
McDowell.....	31	29	207	203	1,893	111	18	659	373	1,117	4,171
Mercer.....	9	7	221	256	769	20	2	241	158	276	1,466
State.....	253	78	214	238	14,036	750	183	3,623	2,118	2,522	23,262

Summary of the Number of Men Employed, Days Worked, Kinds of Ventilation, etc., by Counties, for the Year Ending June 30th, 1898.

COUNTIES.	No. of Mines (Op-erated).	No. Pick Miners Employed.	No. Machine Min-ers and Runners.	(Other Inside Em-ployees.	No. Coke Em-ployees.	(Other Outside Em-ployees.	Total Inside Em-ployees.	Total Outside Em-ployees.	Total No. of Men Employed.	No. Coke Plants Operated.	No. of Fans.	No. of Furnaces.	No. of Natural Ventilations.	No. of Ventila-tions by Steam-jets & Fire-Bas-kets.
Barbour.....	233	14,036	933	3,623	2,522	2,118	12,592	4,670	23,262	17	97	94	57	57
Brooke.....	1	112				10	10	10	133					1
Blancock.....	1	69		16		10	16	10	97		1			
Harrison.....	1	371		67	10	67	137	39	191					
Marion.....	1	1,160	269	280	173	132	1,700	366	1,047		1			
Marshall.....	1	171		12		12	12	12	104					
Mineral.....	1	451		32		32	32	32	157					
Monongalia.....	1	173		13	15	6	137	12	141					
Ohio.....	1	130		12	15	16	157	12	141					
Preston.....	1	193		17	15	16	157	12	141					
Taylor.....	1	105		12	15	16	157	12	141					
Tucker.....	1	105		12	15	16	157	12	141					
Kanawha.....	1	1,000	574	152	224	306	1,526	334	1,860		1			
Nelson.....	1	1,000	574	152	224	306	1,526	334	1,860		1			
Putnam.....	1	1,000	574	152	224	306	1,526	334	1,860		1			
Payette.....	1	1,000	574	152	224	306	1,526	334	1,860		1			
Raleigh.....	1	1,000	574	152	224	306	1,526	334	1,860		1			
Mingo.....	1	1,000	574	152	224	306	1,526	334	1,860		1			
McDowell.....	1	1,000	574	152	224	306	1,526	334	1,860		1			
Murcer.....	1	1,000	574	152	224	306	1,526	334	1,860		1			
Totals.....	233	14,036	933	3,623	2,522	2,118	12,592	4,670	23,262	17	97	94	57	57

Summary of the Tables Giving Number of Employees, Men Killed and Injured, Ovens, Days Mines and Ovens Worked and Acres of Coal Worked Out.—1897-98.

COUNTY.	No. Mines Reported.	EMPLOYEES.						No. Men Injured.	No. Men Killed.	No. Mules and Horses.	Total No. of Coke Ovens.	No. of Days Mines were Operated.	No. Days Coke Ovens were Operated.	Acres of Coal Worked Out.
		Inside.			Outside.									
		Miners.	Labor-ers.	Total.	Labor-ers.	Coke Work-ers.	Total.							
Barbour.....	3	86	4	90	5	3	8	98	1	11	10	172	135	10.00
Brooke.....	3	112	11	123	10	.....	10	133	1	11	.....	225	.....	11.25
Hancock.....	3	69	16	85	12	.....	12	97	1	11	.....	100	.....	9.16
Harrison.....	12	371	67	438	45	10	55	497	3	56	22	191	150	39.60
Marion.....	17	1,376	332	1,708	223	173	396	2,104	3	196	840	256	247	205.20
Marshall.....	4	174	38	212	37	.....	37	249	3	23	.....	209	.....	27.00
Mineral.....	7	454	58	512	40	.....	40	552	3	40	.....	276	.....	45.00
Monongalia.....	2	75	13	88	9	15	24	112	1	10	50	260	150	9.00
Ohio.....	6	130	27	157	15	.....	15	172	1	18	.....	297	.....	22.25
Preston.....	4	198	28	226	33	25	58	279	1	20	83	297	311	39.00
Taylor.....	4	257	34	291	35	.....	35	326	2	29	.....	149	.....	17.33
Tucker.....	8	765	187	952	50	284	334	1,286	17	88	592	286	295	134.75
Kanawha.....	44	2,008	502	2,510	296	30	326	2,836	14	355	162	188	193	329.49
Mason.....	8	204	51	255	29	.....	29	284	6	42	.....	235	.....	26.46
Futnam.....	8	270	58	328	58	.....	58	386	1	57	.....	183	.....	18.50
Fayette.....	68	4,915	1,277	6,192	623	570	1,193	7,385	17	740	1,742	199	275	712.96
Raleigh.....	1	95	25	120	17	19	36	156	1	20	78	158	281	17.00
Mingo.....	12	434	163	597	76	.....	76	673	5	52	.....	211	.....	57.50
McDowell.....	31	2,004	677	2,681	373	1,117	1,490	4,171	31	251	3,758	207	203	347.00
Mercer.....	9	789	243	1,032	158	276	434	1,466	11	130	893	221	256	112.00
Totals.....	253	14,786	3,806	18,592	2,148	2,522	4,670	23,262	121	2,162	8,170	4,254	2,496	2,184.45

Average No. of days worked. Mines 214, Ovens 238.

*Steam Boilers at Coal Mines and Acres of Coal Worked Out.—
1897-98.*

COUNTY.	No. Mines Having Boilers.	No. Insured.	No. Not Insured.	Total No. Boilers in County.	Acres Worked Out.
Barbour.....	1		1	1	10.00
Brooke.....					11.25
Hancock.....					9.16
Harrison.....	4	2	3	5	30.60
Marion.....	11	35	3	38	205.20
Marshall.....	4	7	1	8	27.00
Mineral.....	2		3	3	45.00
Mozongalia.....	1		1	1	9.00
Ohio.....	2		3	3	22.25
Preston.....	1		1	1	39.00
Taylor.....					17.33
Tucker.....	4	13		13	134.75
Kanawha.....	17	6	17	23	329.49
Mason.....	2		5	5	29.44
Putnam.....	1		1	1	18.50
Fayette.....	32	30	33	63	712.96
Raleigh.....	1	2		2	17.00
Mingo.....	4		5	5	57.50
McDowell.....	29	44	24	68	347.00
Mercer.....	8	10	18	28	112.00
Totals.....	124	149	119	268	2,184.45

CHAPTER XIII.

ACCIDENTS

Eighty-seven (87) persons were killed and one hundred and twenty-one (121) were non-fatally injured at the commercial mines in the State during the year. In addition to these three (3) other persons were taken from the mines and a coal bin, two dead and another in a dying condition. However, these are not included in the aggregate number of fatalities for the reason that two were the result of natural causes and another occurred at a country mine which does not come under the jurisdiction of this department.

During the year there has been an increase over the previous year of twenty-five fatal accidents and a decrease of forty-six non-fatal accidents.

McDowell county leads in the number of accidents, there being 30 fatal and 31 non-fatal; Fayette is second, and had 25 fatal and 17 non-fatal; Tucker is third, and had 9 fatal and 17 non-fatal; Marion had 5 fatal and 3 non-fatal; Kanawha had 3 fatal and 14 non-fatal.

A large percentage of the fatal accidents may be attributed

ANNUAL REPORT

to carelessness on the part of the persons killed. The detailed description relative to accidents warrants this statement.

Specially hazardous are the mines in McDowell, Fayette and Tucker. The roof is the principal cause of the great majority of accidents in these counties and in other counties. In McDowell, out of 30 fatalities, 24 were attributed to this cause; in Fayette, out of 25 fatalities 21 were due to this cause, and in Tucker, out of 9 fatalities 7 were due to falls of the roof.

As to the causes of fatal and non-fatal accidents occurring during the past year it is found there were 19.

Falls of slate were responsible for 45.02 per cent.; falls of top coal were responsible for 17.54 per cent., and falls of slate and coal were responsible for 3.31 per cent., making the accidents caused by falls of the roof amount to 65.87 per cent. of all accidents. The mine cars produced 19.91 per cent., and careless handling of powder produced 2.37 per cent. of all accidents. Compared with last year there has been an increase of 15.66 per cent. in the accidents due to falls of the roof; a decrease of 1.92 per cent. due to mine cars. While there has been a large increase in the number of mine machines there were no accidents from this source during the year, while last year there were four.

DAYS OF THE WEEK ON WHICH ACCIDENTS OCCURRED.

Subjoined will be found tables giving the number of fatal and non-fatal accidents which occurred on each day of the week. From this tabulation it may be observed that the greatest number of accidents happen during the fore part of the week, notably on Monday and Tuesday. This may be accounted for from the fact that the mines are idle on Sunday, and while thus idle the ventilation is frequently shut off. Upon the restoration of the ventilating current the temperature of the roof is slightly changed, causing an expansion or contraction of the overhead material and thus inducing a fall of the roof. Another, and more plausible reason, may be the fact that the men fail to thoroughly examine the roof before resuming work.

With a view of curtailing casualties certain legislative enactments are proposed, and until such are made a law little relief may be anticipated.

Table Exhibiting the Number of Fatal and Non-Fatal Accidents, their Causes, Etc., in the State, by Counties, 1897-98.

[F. means Fatal; N. F. means Non-Fatal.]

COUNTIES.	Falls of State.		Falls of Coal.		Falls of Coal and State.		Mine Cars.		Powder Explosions.		R. R. Cars.		Horses and Mules.		Mine Locomotives.		Gas Explosion.		Elevators.		Oven Lorry.		Loose Coal.		Fall of Timber.		Spragging.		Pick.		Fell from Basket.		Fall of roof of Engine House.		Heart Failure.		Rope Breaking on Incline.		Totals.		Total Accidents.	
	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.	N.	F.
Brooke.....	1																																									
Hancock.....																																										
Harrison.....																																										
Marion.....																																										
Marshall.....																																										
Mineral.....																																										
Montgomery.....																																										
Preston.....																																										
Taylor.....																																										
Tucker.....																																										
Kanawha.....																																										
Mason.....																																										
Putnam.....																																										
Fayette.....																																										
Raleigh.....																																										
Mingo.....																																										
McDowell.....																																										
Mercer.....																																										
Totals.....	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15	21	15

* Boy killed in a small country mine.

† Due to natural causes.

1897-1898.

Table Exhibiting the Causes of Fatal and Non-Fatal Accidents and the Number and Percentage by Each Cause.

Causes.	Fatal.	Non-Fatal.	Total.	Percentage.
Falls of roof slate.....	48	47	95	45.02
Falls of top coal.....	15	22	37	17.54
Falls of slate and coal.....	5	2	7	3.31
Injured by mine cars.....	11	31	42	19.91
Powder explosions.....	1	4	5	2.37
Railroad cars.....	3	1	4	1.90
Horses and mules.....		2	2	.95
Mine locomotive.....	1		1	.47+
Gas explosions.....	1	5	6	2.84
Elevators.....	1		1	.47+
Coke oven larry.....	1		1	.47+
Handling coal.....		2	2	.95
Fall of mine timber.....		1	1	.47+
Injured while spragging.....		1	1	.47+
Glancing of miner's pick.....		1	1	.47+
Fell from tippie basket.....		1	1	.47+
Fall of engine house roof.....	1		1	.47+
Heart failure.....	2		2	.95
Breaking of rope on incline.....		1	1	.47+
Totals.....	*90	121	211	100.00

*From this number three (3) should be subtracted, since three deaths are accounted for here which do not properly belong in the report.

Accidents Tabulated According to the Days of the week on Which They Occurred.—1897-1898.

FATAL ACCIDENTS.

	Sun-day.	Mon-day.	Tues-day.	Wednes-day.	Thurs-day.	Fri-day.	Satur-day.	Total.
Inside.....	1	15	12	14	9	14	11	76
Outside.....		2	3	1	2	1	2	11
Totals....	1	17	15	15	11	15	13	87

NON-FATAL ACCIDENTS.

	Sun-day.	Mon-day.	Tues-day.	Wednes-day.	Thurs-day.	Fri-day.	Satur-day.	Total.
Inside.....	1	22	23	22	18	19	10	115
Outside.....	.....	1	2	1	2	.....	.....	6
Totals...	1	23	25	23	20	19	10	121

SUMMARY.—FATAL AND NON-FATAL ACCIDENTS.

	Sun-day.	Mon-day.	Tues-day.	Wednes-day.	Thurs-day.	Fri-day.	Satur-day.	Total.
Inside.....	2	37	35	36	27	33	21	191
Outside.....	.....	3	5	2	4	1	2	17
Totals...	2	40	40	38	31	34	23	208

While recording the deaths of the men killed in the mines in the State it is considered in order to make mention of the demise of three prominent coal operators who died natural deaths during the past year. Mr. John Nuttall, Mr. Fred Rothwell and Mr. M. Erskin Miller, all prominent operators in Fayette county, each of whom did much for the development of the coal industry in this State, died—the first, presumably from old age, being 81 years old; the second, as a result of an accident received two years ago, and the third from complications of some duration.

Summary of the Fatal Accidents which Occurred During the Twelve Months Ending June 30th, 1898.

No.	COUNTY.	Name of Mine.	Name of Person Killed.	Date of Injury.	Date of Death.	Nationality.	Years of Experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total Dependents.	Insurance.	How Killed.	Inquest.
1	Brooke.	Wellsburg.	James Vennin.	Nov. 13.	Dec. 30.	American.	Sev'l yrs.	29	Driver.	M.	M.	1	1	None.	Fall of slate.	no
2	Marion.	Mason C. & C. Co.	Lee Devault.	Oct. 12.	Oct. 23.	American.	2 mos.	29	Miner.	M.	M.	1	1	None.	Fall of coal and slate.	no
3	Marion.	Montena Mine.	Joe Worwick.	Oct. 27.	Oct. 27.	Hungarian.	8 mos.	25	Miner.	M.	Yes.	12	1	None.	Mine cars inside.	no
4	Marion.	Montana No. 2.	Tony Square.	Nov. 5.	Nov. 5.	Italian.	4 mos.	42	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
5	Marion.	Montana.	Andy C. Martin.	Feb. 22.	Feb. 22.	American.	4 yrs.	35	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
6	Marion.	New England.	Carlson Swiser.	Mar. 11.	Mar. 11.	American.	2 yrs.	20	Laborer.	M.	Yes.	1	1	None.	Killed by elevator.	no
7	Mineral.	Elk Garden.	Harry Keam.	Aug. 28.	Aug. 28.	American.	2 yrs.	16	Laborer.	M.	Yes.	1	1	\$400.	Mine cars inside.	no
8	Mineral.	Elk Garden.	A. T. Leatherman.	Sept. 13.	Sept. 13.	American.	3 yrs.	38	Car Shifter.	M.	Yes.	1	1	\$100.	Shifting railroad cars.	no
9	Mineral.	Elk Garden.	Andrew Brady.	Nov. 5.	Nov. 5.	American.	9 yrs.	35	Miner.	M.	Yes.	12	1	\$100.	Fall of coal.	no
10	Monongalia.	Randall.	Grove Dusenberry.	Nov. 17.	Apr. 17.	American.	11	11	School Boy.	M.	Yes.	1	1	\$2,000.	Fall of slate.	no
11	Marshall.	Boggs Run.	August Feller.	Sept. 23.	Sept. 23.	German.	15	15	Laborer.	M.	Yes.	1	1	None.	Mine cars inside.	no
12	Tucker.	Coketon No. 1.	Larry Allway.	July 29.	Aug. 2.	Italian.	3 yrs.	40	Miner.	M.	Yes.	1	1	None.	Fall of coal.	no
13	Tucker.	Thomas Shaft.	John Pugavick.	Aug. 2.	Aug. 2.	Polish.	2 yrs.	25	Miner.	M.	Yes.	1	1	Relief.	Fall of slate.	no
14	Tucker.	Coketon No. 2.	Benjamin Hall.	Dec. 21.	Dec. 21.	American.	40	40	Miner.	M.	Yes.	1	1	\$200.	Fall of coal.	no
15	Tucker.	Thomas Shaft.	Peter Tom.	Dec. 21.	Dec. 21.	Polish.	40	40	Laborer.	M.	Yes.	1	1	None.	Heart failure.	no
16	Tucker.	Thomas Shaft.	Antonio Lanata.	Jan. 31.	Jan. 31.	Italian.	40	40	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
17	Tucker.	Thomas Shaft.	Anton Peyavir.	Feb. 4.	Feb. 4.	Polish.	3 yrs.	25	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
18	Tucker.	Coketon No. 3.	Payton Arler.	Feb. 5.	Feb. 5.	Negro.	21	21	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
19	Tucker.	Coketon No. 3.	John Radigan.	Apr. 13.	Apr. 13.	American.	3 yrs.	40	Miner.	M.	Yes.	1	1	\$500.	Apoplexy.	no
20	Tucker.	Thomas Shaft.	Tony Caspites.	May 16.	May 16.	Polish.	3 yrs.	35	Car Shifter.	M.	Yes.	1	1	\$200.	Railroad car.	no
21	Tucker.	Coketon No. 2.	Geo. W. Hutson.	June 22.	June 22.	American.	2 yrs.	25	Miner.	M.	Yes.	1	1	\$200.	Fall of coal.	no
22	Tucker.	Coketon No. 3.	Joseph Janofski.	June 27.	June 27.	Polish.	12 yrs.	48	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
23	Kanawha.	Keystone.	Jas. W. Dameron.	Jan. 7.	Jan. 7.	American.	20 yrs.	38	Miner.	M.	Yes.	1	1	\$500.	Fall of slate.	no
24	Kanawha.	Chesapeake No. 2.	Church S. Albott.	Apr. 23.	Apr. 23.	American.	2 mos.	26	Laborer.	M.	Yes.	1	1	None.	Mine cars outside.	no
25	Kanawha.	Big Black Band.	Herod Tucker.	June 9.	June 10.	American.	6 yrs.	18	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
26	Mason.	The Harris.	Jesse Kemis.	Oct. 16.	Oct. 18.	American.	6 yrs.	43	Miner.	M.	Yes.	1	1	None.	Fall of coal.	no
27	Putnam.	Plymouth.	Terry Gatens.	Apr. 22.	Apr. 22.	American.	50 yrs.	65	Miner.	M.	Yes.	1	1	None.	Fall of coal.	no
28	Fayette.	Rush Run.	Harvey Mekamy.	July 20.	July 20.	Negro.	3 yrs.	45	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
29	Fayette.	No. 2 Ansted.	William Gray.	July 28.	July 28.	English.	8 yrs.	30	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
30	Fayette.	Dimmock.	J. R. Woodram.	Aug. 4.	Aug. 4.	American.	8 yrs.	30	Miner.	M.	Yes.	1	1	None.	Struck by coal and slate.	no
31	Fayette.	Alaska.	Doctor Shepherd.	Aug. 29.	Sept. 2.	American.	3 yrs.	30	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
32	Fayette.	Fayette Mine.	Ben Johnson.	Sept. 7.	Sept. 7.	Negro.	2 yrs.	35	Miner.	M.	Yes.	1	1	None.	Fall of slate.	no
33	Fayette.	Dubree.	Charles Gelardi.	Oct. 19.	Oct. 19.	French.	2 yrs.	35	Miner.	M.	Yes.	1	1	None.	Mine cars on incline.	no

COUNTY.	Name of Mine.	Name of Person Killed.	Date of Injury.	Date of Death.	Nationality.	Years of Experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total Dependents.	Insurance.	How Killed.	Inquest.
24 Fayette.	Greenwood.	Wm. Hampton.	Nov. 8.	Nov. 8.	American.	12 1/2	12 1/2	Miner.	X	M Yes	Sev 1		None	Fall of roof.	no
33 Fayette.	Ansted.	Robert Tush.	Nov. 23.	Feb. 7.	American.	30 63	30 63	Miner.	X	M Yes	Sev 1		None	Fall of slate.	no
36 Fayette.	Southside.	Thomas Orman.	Mar. 8.	Mar. 8.	American.	20	20	Miner.	X	M Yes			None	Fall of slate.	no
37 Fayette.	Kush Run.	C. E. Newbert.	Dec. 13.	Dec. 13.	German.	15 25	15 25	Track layer	X	M Yes			None	Burned by gas.	no
38 Fayette.	Brown.	Chas. A. Jones.	Dec. 16.	Dec. 16.	American.	16	16	Miner.	X	M Yes			\$50	Kettle bottom.	no
39 Fayette.	Sugar Creek.	F. M. Britt et	Dec. 27.	Dec. 27.	American.	6 mos.	6 mos.	Miner.	X	M Yes	1	1		Fall of slate.	no
40 Fayette.	Thurmond.	Jes. A. Martin.	Jan. 26.	Apr. 23.	American.	8 38	8 38	Electrician	X	M Yes	5	5		Fall of slate.	no
41 Fayette.	Gauley Mount'n	Joseph Vaughan.	Feb. 23.	Feb. 23.	American.	12 1/2	12 1/2	Miner.	X	M Yes				Fall of coal.	no
42 Fayette.	Thurmond.	Scott Thomas.	Apr. 13.	Apr. 13.	Negro.	3 36	3 36	Miner.	X	M Yes	1	1		Fall of slate.	no
43 Fayette.	Turkey Knob.	Charles Hill.	May 7.	May 7.	Polish.	6 mos 19	6 mos 19	Driver	X	M Yes				Fall of slate.	no
44 Fayette.	Gauley Mount'n	Clarence Dooley.	May 12.	May 12.	American.	2 36	2 36	Miner.	X	M Yes				Fall of roof.	no
45 Fayette.	Cumard.	William Kirk.	May 13.	May 13.	American.	1 27	1 27	Miner.	X	M Yes				Fall of slate.	no
46 Fayette.	Sunrise.	Robert Walters.	May 26.	May 26.	American.	5 29	5 29	Miner.	X	M Yes				Fall of slate.	no
47 Fayette.	Stone Cliff.	James Nealey.	May 27.	May 27.	Negro.	1 mo	1 mo	Miner.	X	M Yes				Fall of slate.	no
48 Fayette.	Sugar Creek.	M. V. B. Smith.	May 30.	May 30.	American.	4 24	4 24	Miner.	X	M Yes			\$50	Fall of slate.	no
49 Fayette.	Macdonald.	Charles Carter.	June 1.	June 1.	Negro.	2 24	2 24	Miner.	X	M Yes				Fall of slate.	no
50 Fayette.	Big Quinimont	Haic Brown.	June 1.	June 4.	American.	25 1/2	25 1/2	Laborer	X	M Yes	6	6		Mine cars inside.	no
51 Fayette.	Big Quinimont	Henry Litton.	June 6.	June 6.	American.	15 10	15 10	Tipple h'nd	X	M Yes	6	6		Mine cars on incline.	no
52 Fayette.	Quinimont	Phil. Jones.	June 20.	June 20.	Negro.	3 1/2	3 1/2	Miner.	X	M Yes			None	Fall of slate.	no
53 Fayette.	Thacker.	J. F. Morris.	May 10.	May 10.	American.	Many	Many	Miner.	X	M Yes	1	1		Mine cars on incline.	no
54 Mingo.	Phacker.	Lee Small.	May 10.	May 10.	American.	1 18	1 18	Driver	X	M Yes			None	Fall of draw slate.	no
55 Mingo.	Maritime	James Fisher.	June 6.	June 6.	American.	2 24	2 24	Miner.	X	M Yes			None	Fall of kettle bottom.	no
56 McDowell.	Keystone	Samuel Flipping	July 11.	July 11.	Negro.	11 14	11 14	Miner.	X	M Yes	4	4		Fall of slate.	Yes
57 McDowell.	Tidewater.	Geo. M. Davidson	July 27.	July 27.	American.	6 35	6 35	Miner.	X	M Yes			None	Fall of slate.	no
58 McDowell.	Gill m.	Salv. Amendola.	Aug. 9.	Aug. 9.	Italian.	6 35	6 35	Miner.	X	M Yes			None	Fall of slate.	Yes
59 McDowell.	Algonia.	Clem. Rogers.	Aug. 12.	Aug. 12.	Negro.	21	21	Miner.	X	M Yes			\$50	Fall of slate.	no
60 McDowell.	Keystone.	John Lydon.	Aug. 16.	Aug. 16.	American.	21	21	Miner.	X	M Yes				Fall of draw slate.	no
61 McDowell.	Shamokin.	John W. Johnson	Aug. 17.	Aug. 17.	American.	22	22	Miner.	X	M Yes			D't know	Fall of slate.	Yes
62 McDowell.	Arlington.	T. W. Wadhill	Sept. 7.	Sept. 7.	American.	6 mos	6 mos	Miner.	X	M Yes				Fall of coal.	no
63 McDowell.	Algonia.	Steve Kish.	Sept. 8.	Sept. 8.	Hungarian.	5 26	5 26	Miner.	X	M Yes				Fall of slate.	Yes
64 McDowell.	McDowell.	Henry Cole.	Sept. 13.	Sept. 13.	American.	1 1/2	1 1/2	Miner.	X	M Yes				Steam locomot. in mine	no
65 McDowell.	Keystone.	Thos. Flipping	Sept. 21.	Sept. 21.	Negro.	5 26	5 26	Miner.	X	M Yes				Fall of slate.	Yes
66 McDowell.	Upland.	Andr. G. Green.	Sept. 23.	Sept. 23.	Negro.	1 1/2	1 1/2	Miner.	X	M Yes				Fall of slate.	no

Fatal Accidents During 1898.—Continued.

COMPANY.	Name of Mine.	Name of Person Killed.	Date of Injury.	Date of Death.	Nationality.	Years of Experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total Dependents.	Insurance.	How Killed.	Inquest.
67 McDowell.....	Fidewater.....	W. H. Spradlin.....	Oct. 13	Oct. 14	American.....	9 mon	34	Miner.....	M	yes	1	1	.....	Powder explosion.....	no
69 McDowell.....	Greenbrier.....	Wade Kirby.....	Oct. 28	Mar. 2	American.....	19	34	Miner.....	M	.....	.....	.....	.....	Fall of sand stone.....	no
70 McDowell.....	Arlington.....	Turner Williams.....	Nov. 16	Nov. 16	Negro.....	.....	23	Miner.....	M	.....	.....	.....	none.....	Fall of coal.....	no
71 McDowell.....	Hick Branch.....	Henry Scott.....	Nov. 17	Nov. 20	American.....	Sevr 1	31	Miner.....	M	.....	.....	.....	none.....	Fall of coal.....	yes
72 McDowell.....	Houston.....	James Jennings.....	Nov. 19	Nov. 19	American.....	.....	.....	Miner.....	M	.....	.....	.....	.....	Fall of slate.....	no
73 McDowell.....	Algonia.....	William Taylor.....	Dec. 3	Dec. 3	Negro.....	8	25	Miner.....	M	.....	.....	.....	.....	Fall of slate (ket. bot.).....	no
74 McDowell.....	Greenbrier.....	Zeb. Pelcher.....	Jan. 8	Jan. 8	American.....	13 dys	35	Miner.....	M	yes	2	3	.....	Fall of slate.....	no
75 McDowell.....	Pulaski.....	Mike Sarelso.....	Feb. 16	Feb. 16	Hungarian.....	.....	.....	Miner.....	M	yes	.....	.....	.....	Fall of slate (ket. bot.).....	no
76 McDowell.....	Houston.....	John Morgan.....	Feb. 21	Feb. 24	American.....	6	24	Miner.....	M	.....	.....	.....	.....	Fall of slate.....	no
77 McDowell.....	Shamokin.....	Ilerman Harvey.....	Mar. 9	Mar. 9	American.....	1	20	Driver.....	M	.....	.....	.....	.....	Fall of coal and slate.....	no
78 McDowell.....	Lynchburg.....	David Allen.....	Mar. 12	Mar. 12	Negro.....	.....	.....	Miner.....	M	.....	.....	.....	.....	Fall of coal and slate.....	no
79 McDowell.....	Lynchburg.....	Joseph Allen.....	Mar. 12	Mar. 12	Negro.....	5 mon	21	Miner.....	M	.....	.....	.....	.....	Fall of coal and slate.....	no
80 McDowell.....	Fidewater.....	Charles Gibson.....	Mar. 11	Mar. 11	American.....	.....	19	Engineer.....	M	.....	.....	.....	.....	Roof of eng house fell.....	no
81 McDowell.....	Furkey Gap.....	Wm. Hapcock.....	Mar. 26	Mar. 26	Negro.....	5	25	Oven ch gr.....	M	.....	.....	.....	.....	Oven Larry.....	no
82 McDowell.....	Algonia No. 2.....	William Bailey.....	Apr. 7	Apr. 7	Negro.....	.....	21	Miner.....	M	.....	.....	.....	.....	Fall of slate.....	yes
83 McDowell.....	Algonia No. 2.....	And. Bennett.....	Apr. 15	Apr. 15	Negro.....	4	26	Driver.....	M	yes	.....	.....	.....	Fall of slate.....	no
84 McDowell.....	Eureka.....	Hugh Charlton.....	Apr. 20	Apr. 20	Negro.....	1	21	Miner.....	M	.....	.....	.....	.....	Fall of coal.....	no
85 McDowell.....	Elkhorn.....	W. Per. Haines.....	May 3	May 3	Negro.....	3	22	Miner.....	M	.....	.....	.....	.....	Fall of slate (ket. bot.).....	yes
86 McDowell.....	Turkey Gap.....	Homor G. Davis.....	June 11	June 11	American.....	6 mon	10	Switch ten.....	M	.....	.....	.....	.....	Miner cars inside.....	no
87 Mercer.....	Louisville.....	Samuel Gills.....	Feb. 25	Feb. 25	American.....	5	35	Track layer.....	M	yes	4	5	.....	Fall of slate.....	no
88 Mercer.....	Coldale.....	W. S. Nichols.....	Apr. 15	Apr. 15	American.....	1	30	Miner.....	M	.....	.....	.....	.....	Fall of top coal & slate.....	no
89 Mercer.....	Goodwill.....	Charles Pierson.....	Apr. 25	Apr. 25	Negro.....	1 mon	19	Miner.....	M	.....	.....	.....	.....	Fall of slate.....	no
91 Mercer.....	Louisville.....	Oliver Deshaga.....	May 2	May 9	Negro.....	5	6	Miner.....	M	.....	.....	.....	.....	Fall of coal.....	no
91 Raleigh.....	Royal.....	William Trive.....	Nov. 2	Nov. 2	Negro.....	15	37	Miner.....	M	yes	4	5	L. O. O. F. K. P.	Fall of slate.....	.....

COUNTY.	Name of Mine.	Name of person injured.	Date of Accident.	Nationality.	Years of Experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.
1	Brooke.	Gilchrist.	July	11 Irish.	16	50	Miner.	Fall of roof-stone.	Leg broken.
2	Hancock.	Sligo.	Sept.	21 Irish.	25	47	Miner.	Fall of slate.	Col. bone brok., hips bru.
3	Harrison.	Howard.	June	21 American.	16	54	Miner.	Fall of rock.	Leg, arm broken.
4	Harrison.	Howard.	July	20 American.	1	54	Miner.	Fall of coal.	Three ribs brok., breast in
5	Harrison.	Howard.	July	23 American.	1 1/2	26	Miner.	Fall of slate.	Hip joint dislocated.
6	Marion.	King.	Sept.	22 American.	7	24	Driver.	Empty mine c'r in	Leg broken.
7	Marion.	Monongah No. 3.	Oct.	18	1	28	Miner.	Premature explos.	Leg broken, head cut.
8	Marion.	Chelton.	Dec.	30 American.	1	28	Miner.	Mine cars.	Leg broken, head cut.
9	Marshall.	Kuntz.	Dec.	20 American.	1	28	Miner.	Premature explos.	Hands, arms burned.
10	Marshall.	Kuntz.	Dec.	20 American.	1	28	Miner.	Explosion of gas.	Face, ears burned.
11	Marshall.	Kuntz.	Dec.	21 American.	1	28	Miner.	Explosion of gas.	Face, hands burned.
12	Marshall.	Kuntz.	Dec.	21 American.	1	28	Miner.	Explosion of gas.	Face, hands burned.
13	Marshall.	Kuntz.	Dec.	21 American.	1	28	Miner.	Explosion of gas.	Face, hands burned.
14	Marshall.	Kuntz.	Dec.	21 American.	1	28	Miner.	Explosion of gas.	Face, hands burned.
15	Mineral.	Windom H.	April	1 American.	6 mon.	51	Miner.	Explosion of gas.	Face, hands burned.
16	Monongalia.	Opekiska.	July	18 Slavish	15	38	Miner.	Explosion of gas.	Face, hands burned.
17	Preston.	Funnelton.	July	7 American.	15	38	Miner.	Fall of bone-coal.	Leg broken.
18	Taylor.	Flemington No. 3.	Sept.	13 American.	2 1/2	23	Driver.	Slight fall b'ne c'l	Back injured.
19	Taylor.	Flemington No. 4.	Dec.	13 American.	6	20	Miner.	Fall of slate.	Leg broken, hand cut.
20	Tucker.	Thomas Drift.	July	20 Polish.	4	30	Roadman.	Fracture of wrist, bruises.	Fracture of wrist, bruises.
21	Tucker.	Coketon No. 3.	Aug.	20 Negro.	3	30	Roadman.	Arm lacerated, fractured.	Fracture of wrist, bruises.
22	Tucker.	Coketon No. 2.	Nov.	2 Polish.	4	30	Roadman.	Explosion powder	Face, hands burned.
23	Tucker.	Coketon No. 2.	Nov.	18 German.	4	30	Roadman.	Fall of slate.	Leg fractured.
24	Tucker.	Coketon No. 3.	Nov.	25 American.	4	30	Roadman.	Fall of slate.	Back, hip bruised.
25	Tucker.	Coketon No. 3.	Nov.	8 American.	4	30	Roadman.	Fall of coal.	Shoulder badly bruised.
26	Tucker.	Coketon No. 3.	Nov.	8 American.	4	30	Roadman.	Fall of slate.	Foot badly mashed.
27	Tucker.	Coketon No. 3.	Nov.	8 American.	4	30	Roadman.	Fall from basket.	Knee hurt.
28	Tucker.	Coketon No. 2.	Dec.	14 American.	10	46	Miner.	Fall of slate.	Bruised, ankle sprained.
29	Tucker.	Thomas Drift.	Jan.	20 Irish.	25	46	Miner.	Fall of slate and coal.	Bruised, ankle sprained.
30	Tucker.	Thomas Drift.	Jan.	12 Italian.	3	40	Miner.	Explosion powder	Face, arm, head burned.
31	Tucker.	Thomas Drift.	Jan.	14 American.	3	40	Miner.	Fall of slate.	Arm broken, head cut.
32	Tucker.	Thomas Shaft.	Jan.	14 American.	3	40	Miner.	Fall of draw-slate.	Foot mashed.
33	Tucker.	Coketon No. 3.	Feb.	3 Polish.	3	30	Miner.	Mine cars.	Hip bone broken.
34	Tucker.	Coketon No. 3.	Feb.	5 Negro.	3	30	Miner.	Fall of slate.	Leg broken, arm dislocat.
35	Tucker.	Coketon No. 3.	Feb.	5 Negro.	3	30	Miner.	Fall of slate.	Leg broken

Summary Non-Fatal Accidents which Occurred During Twelve Months Ending June 30, 1898—(Continued).

No.	COUNTY.	Name of Mine.	Name of Person Injured.	Date of Accident.	Nationality.	Years of Experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.
31	Fucker	Coketon No. 2.	Patrick Quinn.	March 16.	Irish.	5	19	Miner.	Pick glanced.	Eye injured.
32	Tucker	Coketon No. 2.	Jas. A. Goodridge.	April 9.	American.	5	25	Miner.	Fall of coal.	Head injured.
33	Fucker	Coketon No. 3.	Chas. Strieb.	May 27.	German.	1	30	Miner.	Fall of slate.	Right leg broken.
36	Kanawha	Aene.	Leonard Buzzard.	Jan. 20.	American.	10	15	Miner.	Loose coal incline.	
37	Kanawha	Keystone.	M. W. Clendenen.	Feb. 8.	American.	11	26	Miner.	Fall of slate.	Hip injured.
38	Kanawha	Winifrede.	H. V. Green.	Feb. 11.	American.	11	25	Miner.	Miner car inside.	Ribs broken, head bruised.
39	Kanawha	Campbell Creek.	Hernandez Nelson.	Feb. 25.	American.	20	18	Miner.	Fall of slate.	Fracture of femur.
40	Kanawha	Keystone.	Wm. M. Miller.	Feb. 25.	American.	6	30	Miner.	Fall of coal.	Hip injured.
41	Kanawha	Keystone.	David White.	Feb. 25.	American.	6	30	Miner.	Miner cars.	Ankle crushed.
42	Kanawha	Campbell Creek.	Ernest Marshall.	March 2.	American.	Several	20	Driver.	Fall of slate.	Dislocation of clavicle.
43	Kanawha	Campbell Creek.	John Layton.	March 8.	American.	6	20	Driver.	Miner cars.	Shoulder bruised.
44	Kanawha	Ronda.	Lewis Farley.	March 9.	American.	Many	30	Driver.	Miner cars & mule.	Bruised and sprained knee.
45	Kanawha	Ronda.	Chas. E. Chapman.	March 12.	American.	Many	10	Miner.	Fall of coal.	Shoulder bruised.
46	Kanawha	Virginia.	Robert Hudnal.	April 15.	American.	19	22	Driver.	Miner cars.	Injured in hips and bowels.
47	Kanawha	Campbell Creek.	Frank Cochran.	May 11.	American.	19	17	As U. parent.	Kettle bottom.	Leg broken.
48	Kanawha	Winifrede South.	Steve Pritt.	June 27.	American.	16	30	Driver.	Miner cars.	Foot mashed.
49	Kanawha	New Haven.	Ruda Foush.	July 7.	American.	10	27	Miner.	Fall of slate.	Back injured.
50	Mason.	New Haven.	Wm. H. Furley.	July 10.	American.	8	30	Miner.	Miner cars.	Leg broken.
51	Mason.	New Haven.	Joseph Bolen.	Feb. 3.	American.	12	30	Miner.	Fall of slate.	Foot mashed.
52	Mason.	New Haven.	Charles Powell.	Feb. 10.	American.	6	28	Miner.	Fall of slate.	Elbow sprained, head cut.
53	Mason.	New Haven.	George Smith.	April 12.	American.	5	24	Miner.	Miner cars.	Leg fractured.
54	Mason.	New Haven.	Joseph Woodrum.	May 9.	American.	5	45	Miner.	Fall of slate.	Hips bruised.
55	Mason.	Florence.	Alfred Woodson.	April 21.	Negro.	7	14	Miner.	Miner cars.	Hips injured.
56	Putnam.	Brooklyn.	George W. Lymmer.	July 18.	English.	20	38	Miner.	Fall of slate.	Cut in head, back hurt.
57	Fayette.	North Side.	William Barnett.	July 21.	Negro.	Several	21	Miner.	Fall of slate.	Spine fractured.
58	Fayette.	St. Clair.	Berd Menefe.	Sept. 9.	Negro.	10	20	Miner.	Fall of slate.	Jaw broken.
59	Fayette.	South Side.	David Shaw.	Nov. 11.	Scotch.	10	25	Miner.	Fall of coal.	Hand injured.
60	Fayette.	North Side.	Tom McQuaide.	Dec. 20.	American.	Several	36	Miner.	Fall of slate.	Spine injured.
61	Fayette.	South Side.	George Dooley.	Dec. 21.	American.	Several	36	Miner.	Fall of coal.	Head cut, ribs fractured.
62	Fayette.	Mecca.	William Winston.	Jan. 10.	Negro.	3	21	Driver.	Fall of slate.	Leg broken.
63	Fayette.	Red Ash.	Jacob Johnson.	Jan. 11.	Negro.	3	15	Miner.	Fall of coal.	Chest, shoulder bruised.
64	Fayette.	Shu.	James Slack.	Feb. 7.	American.	3	20	Miner.	Miner cars.	Spine broken.
65	Fayette.	Shu.	Will Carter.	Feb. 9.	American.	Several	19	Driver.	Miner cars.	Leg injured.

No.	COUNTY.	Name of Mine.	Name of Person Injured.	Date of Accident.	Nationality.	Years of Experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.
67	Fayette	Brooklyn	A. C. Blaney	March	1 Negro	6	21	Machine runner	Fall of slate.	Spine injured.
68	Fayette	Smith-side	Ben Boss	April	11 American		21	Driver	Mine cars.	Fracture of humerus.
69	Fayette	Thurmond	W. A. Foster	April	13 Negro	5	30	Miner	Fall of slate.	Congestion of brain.
70	Fayette	Red Ash	Henry Morgan	April	28 Negro		30	Pumper	Mine cars on incline	Cuts in spine, skull injured
71	Fayette	Cliff Top	Paul E. Piney	May	31 American	1	27	Miner	Mine cars.	Leg broken.
72	Fayette	Turkey Knob	Edward Crickmer	May	31 American		27	Miner	Mine cars.	Leg broken.
73	Fayette	Vulcan	Andrew Wells	June	27 Scotch	Many	32	Miner	Fall of timber	Leg fractured, otherwise inj'r.
74	Mingo	Maritime	G. H. Hutchinson	July	10 American		34	Driver	Mine car and mule	Hip fractured.
75	Mingo	Maritime	W. A. Murphy	October	1 American		21	Machine helper	Fall of slate	Fracture of femur.
76	Mingo	Maritime	H. D. Maynard	October	3 American		30	Laborer	Railroad car.	Fracture of frontal bone.
77	Mingo	Maritime	William Cornwell	May	3 American	3	15	Driver	Mine cars.	Right tibia fractured.
78	Mingo	Baker	S. T. Hardy	May	10 Negro		22	Miner	Rope breaking	Skull fractured.
79	McDowell	Pulaski	J. B. Dunly	July	8 American	6 weeks	21	Stragger	Mine cars.	Contusion hip and back.
80	McDowell	Greenbrier	Charles Pack	July	16 Negro	12	11	Miner	Fall of coal	Scalp, eye & hand injured.
81	McDowell	Pulaski	Edgar James	August	2 American	7 months	40	Trapper	Mine cars.	Congestion of foot.
82	McDowell	Greenbrier	Lewis Gabriel	August	1 Italian		27	Miner	Fall of slate.	Leg and back fractured.
83	McDowell	Lick Branch	A. D. Collins	August	3 American	1	25	Miner	Fall of slate.	Loins and thigh injured.
84	McDowell	Pulaski	E. D. Mosier	August	20 American	7 months	30	Track layer	Kettle bottom	Leg broken.
85	McDowell	Turkey Gap	John Holland	October	2 American	8 months	23	Miner	Fall of coal	Leg broken.
86	McDowell	Tidewater	William Steele	October	13 American		23	Miner	Explosion powder	Badly burned.
87	McDowell	Turkey Gap	Edward Plinnie	Nov'r	8 American		22	Miner	Fall of slate.	Arm broken.
88	McDowell	Fork	John Chilton	Nov'r	9 Negro	Many	22	Miner	Fall of coal.	Leg broken.
89	McDowell	Norfolk	William Grigg	Nov'r	23 American	Several	21	Motorman	Mine cars.	Collar bone broken.
90	McDowell	Bottom Creek	Chas. A. Robinson	Nov'r	24 Negro	Many	38	Miner	Fall of slate.	Leg broken.
91	McDowell	Greenbrier	James Smith	Dec'r	21 American	Several	25	Miner	Fall of slate.	Ankle sprained.
92	McDowell	Bottom Creek	Samuel Hunter	Dec'r	21 Negro	1 day	18	Laborer	Fall of slate.	Leg broken.
93	McDowell	Norfolk	J. A. Perdue	Dec'r	29 American		40	Miner	Fall of coal.	Badly bruised.
94	McDowell	Algona	Walter Heiley	Jan'y	3 Negro	5	24	Miner	Kettle bottom	Leg broken.
95	McDowell	Norfolk	G. B. Hurley	Jan'y	31 American	20	40	Miner	Fall of slate.	Leg injured.
96	McDowell	Poshtatan	Charles Marusa	Feb'y	12 Hungarian		20	Miner	Fall of slate.	Collar bone broken.
97	McDowell	Elkhorn	William Eam	Feb'y	11 American	6	20	Car runner	Cars on incline	Shoulder dislocated.
98	McDowell	Turkey Gap	George Brown	Feb'y	13 Negro		31	Brakeman	Mine cars	Toe mashed.
99	McDowell	Turkey Gap	Samuel Lawson	Feb'y	22 Negro		18	C. oven char	Mine cars.	Toes mashed.

Summary Non-Fatal Accidents which Occurred During Twelve Months Ending June 30, 1898.—Continued.

No.	COUNTY.	Name of Mine.	Name of Person Injured.	Date of Accident.	Nationality.	Years of Experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.
100	McDowell	Norfolk	F. L. Miller	March 1.	Negro	Several	25	Miner	Spraying	Thumb crushed.
101	McDowell	Norfolk	Wm. Yates	March 11	American		30	Miner	Fall of coal.	Scalp wound, ankle sprained
102	McDowell	McDowell	George Boniface	April 8.	Italian		45	Miner	Fall of slate	Back and head injured.
103	McDowell	Angle	Jefferson Mitchell	April 14.	Negro	Several	40	Miner	Fall of slate	Slightly injured.
104	McDowell	McDowell	F. C. Mitchell	April 15.	American		28	Miner	Fall of coal.	Leg fractured.
105	McDowell	Norfolk	Charles Flowers	April 22.	Negro	1	33	Miner	Fall of coal.	Contusion of loin.
106	McDowell	Peerless	S. N. Gilmore	May 3.	American		25	Miner	Fall of slate.	Legs broken.
107	McDowell	Peerless	William Pettis	June 3.	American	2 months	21	Motorman	Mine cars	Leg crushed.
108	McDowell	Algoma	James Starkey	June 8.	Negro		22	Miner	Mine cars	Leg amputated.
109	McDowell	Algoma	William Sueko	June 13.	Hungarian		36	Miner	Fall coal and slate	Knee dislocated.
110	McDowell	Pulaski	Taylor Raleigh	June 20.	Negro	2	22	Miner	Mine cars	Finger mangled.
111	Mercer	Coaldale	Carter Dickerson	July 28.	Negro		35	Driver	Fall of coal.	Knee sprained.
112	Mercer	Coaldale	Dave Osburne	Aug. 11.	American	10	15	Miner	Mine cars	Leg bruised.
113	Mercer	Coaldale	Paul Toal	Aug. 11.	Hungarian	3	30	Brakeman	Fall of coal.	Leg broken.
114	Mercer	Louisville	J. A. Lee	Sept. 27.	American	8	30	Miner	Fall of coal.	Ribs fractured.
115	Mercer	Louisville	Peyton Anthony	Oct. 8.	Negro	4	30	Miner	Fall of coal.	Ankle sprained, foot crushed
116	Mercer	Louisville	C. J. Lyons	Nov. 3.	Negro	5	40	Miner	Drop'd lump coal	Bruised in groin.
117	Mercer	Louisville	Joe Davidson	Dec. 10.	American	2	21	Driver	Mine cars.	Foot injured.
118	Mercer	Louisville	Thaddeus Cole	Jan. 11.	American	2	16	Driver	Mine cars.	Slight bruises.
119	Mercer	Goodwill	John Jewell	Jan. 24	American	25	19	Miner	Fall of slate.	Shoulder bruised.
120	Mercer	Coaldale	Robert Early	May 16	American	3 months	12	Trapper	Mine cars.	Leg broken.
121	Mercer	Coaldale	Alonzo Golden	June 23.	American	3 months	30	Miner	Fall of slate.	Foot mangled, toes cut off.

CHAPTER XIV.

Inspections Made During the Year.

The inspection year covered by this report includes 11 months, from August 1st, 1897, to June 30th, 1898. This is made necessary for the reason that the previous printed report was made to cover the month of July, 1897, for reasons that were stated in said report. During the 11 months ending June 30th, 1898, there were made by the District Inspectors 671 inspections of commercial mines, and 25 inspections of mines employing less than 10 men were made in the Second District. From the subjoined table it may be seen that each inspector made an average of 174 inspections during the 11 months. This does not include the visits paid to the mines for the purpose of examining into the causes of accidents. A number of visits were made to mines which were found to be idle, but those visits are not included in the table. To make a thorough and proper inspection of a mine it takes a full day's time to inspect a great many of the mines in the State. The mines are constantly growing in their number of entries and rooms and a majority of our mines are of large area and are large producers. A number of operators have a group of mines in the same locality and those are usually classed as one mine, whereas the inspector is obliged to examine as many as eight or ten different openings. Counting the different and distinct openings subject to the mine laws, each district inspector has at least 75 mines to inspect, and to visit these four times per year it occupies all his time, taking one mine per day. The inspections are carefully and thoroughly made with a view of improving the condition of the mines for the benefit of the miners and operators. A careful perusal of this report will show that the mines are gradually being improved as to drainage, ventilation and mechanical facilities for handling the product.

*Number of Inspections Made in the State from August 1st,
1897, to July 1st, 1898, by Districts and Months.*

DISTRICTS.	No. of Mines.	1897. August.	September.	October.	November.	December.	1898. January.	February.	March.	April.	May.	June.	Total.	Small Mines.	Grand Total.
First	71	6	20	12	20	22	16	20	17	14	30	2	185	...	...
Second	62	...	9	2	21	19	12	12	7	22	19	2	146	25	171
Third	62	24	11	2	16	19	10	12	16	16	26	16	180	...	...
Fourth	52	6	20	12	21	16	16	13	12	19	2	17	160	...	...
Totals	247	36	60	46	78	76	54	69	52	77	77	46	671	25	696

CHAPTER XV.

*Condition of Mines as Reported By the District Inspectors to
the Chief Mine Inspector for 1898.*

James W. Paul.....	Chief Inspector.....	Charleston
S. A. Lewis.....	Inspector First District.....	Fairmont
Jerry Meade.....	Inspector Second District.....	Charleston
Edward Pinkney.....	Inspector Third District.....	Montgomery
Wm. J. Preece.....	Inspector Fourth District.....	Coaldale

Mines Which Required Special Attention.

Moundsville Shaft.....	Marshall County
Glendale Shaft.....	Marshall County
Elm Grove Shaft	Ohio County
Monarch Mine, Drift.....	Kanawha County

The above shaft mines at times have explosive gas in them and owing to their location they are subject to extraordinary inflows of water during rainy seasons and high water stages in the Ohio River and Wheeling Creek, in the case of Elm Grove Shaft. As reported by the Inspector of Mines for the First District, it was evident that there were several very apparent dangers surrounding the operations of these shafts, but the operators contended that there was no immediate danger. To prevent this department from any unjust action against any or all of the above operators, there was sent Mr. J. I. Absalom, the Inspector of the Third Mining District, in accordance with

Section 1 of the mining laws of this State, to make an inspection of these shafts with instruction to pay special attention to these features which involved the safety of the men working therein and to the appliances for raising and lowering men in the shaft and the means of escape in case of any disaster, and the methods of communication between the surface and underground workings. Complying with these instructions, Mr. Absalom proceeded to these shafts and after having made an inspection of each one gave the following reports:

MARSHALL COUNTY.

Moundsville Shaft.

On January 14th, I found the Moundsville Coal Company's shaft operating in violation of the mining laws of this State in the following respects: "First, They do not provide, as required by Section 5 of the mining laws, a map of the mine. They have not had a survey of the mine made since March, 1896. The strict observance of this law, I consider, should be strictly enforced in order to show the proximity of workings to the Ohio River, the mine being at a lower level than the river. Second, They fail, or do not comply with Section 6 of the law. As to the equipments of their second opening it is not reasonably accessible, being encumbered with pipes and debris at the entrance from within. The top landing would not be safe as it is enclosed with plank and scrap iron. The hoisting engine at this opening is not provided with a brake, and a hemp rope is in use which I consider not reliable. Neither have they a reasonable signal at this opening. Third, They do not comply with Section 8 of the law, as their cages for hoisting are wholly unprovided with the necessary or the requisite safety attachments. Their cage guides and supports (buntings) are too weak. They use no safety catches, no hoods over the top of cages, and have insufficient hand rails. No safety gates on top of the shaft. The brake on the hoisting engine is not sufficiently safe to prevent overwinding. There is no provision to prevent cars, men or other matter from falling down the shaft; neither is there any protection whatever for men riding up and down the shaft going to and from their work. On the whole I find this shaft, so far as it conforms with the law in the methods and appliances used in providing for the safety of the

employes being taken to and from their work, deficient and at all times unsafe, and at no time, under the law, should such a condition be or reasonably permitted to be. The management is aware of the condition as set forth above. I would suggest that a reasonable time be given this company to provide for the fore-going, which they, I believe, will admit to exist. The requirements of the law are a necessity for their own protection as well as for the safety of the men." Since the above report has been made this shaft has been provided with safety cages, and timbers, or new guides, put in the shaft. The second opening shaft is not considered safely equipped for raising or lowering men, even in a case of emergency. During the spring rise in the Ohio River a great quantity of water found its way into this mine through the air shaft, and at the date of this report the company is making an effort to get the water out. The general condition of this mine is being improved.

John W. Beury, Supt. C. E. Pickett, Mine Boss.

Glendale Shaft.

As noted in the last printed report this mine was very wet, the air was deficient in two headings, no safety catches were on the cages, and the second opening was not in a condition to be traveled by men. On January 13th. Mr. Absalom made an inspection of this mine and reported his findings as follows: "I found this shaft very well equipped in its hoisting apparatus and cages, they conforming to the requirements of the law. The second opening being a slope is now accessible, and by direction of Mine Inspector Lewis, is being safely timbered. This opening is, as I think all second openings should be, at the shallow depths of the district, driven at such an angle that men can easily travel up and down without aid of ladders or machinery. Too much attention cannot be paid to frequent surveys of this mine owing to its proximity to the Ohio River, since the cutting of a fissure in the over-lying strata in some parts of this mine would suddenly deluge the mine. Their pumping equipment has a surplus provision to pump a great deal more water than they are now required to handle. Owing to the closeness of this shaft to the river, I would say that an opening should be made near the head of their main entry which would more readily provide for the safety of the men in case of water breaking in." Later reports on the condition of this mine state that the air is

good except on the straight heading where the brattices were found in a bad condition. The drainage of the mine has been improved. Preparations are being made for the instalation of an electrical mining plant.

F. H. Blake, Sup't. John Wallace, Mine Boss.

OHIO COUNTY.

Elm Grove Shaft.

On January 13th, Mr. Absalom inspected this mine and reported that he found the mine in operation, but not complying with the law of the State concerning shafts in the following particulars:

"First. They do not have surveys made of the mine as required by Section 5 of the law. The map shows the last survey to have been made in Oct., 1896. Second. They do not comply with Section 6 of the law, as their entrance to second opening should be better drained of standing water, and the approach at the bottom of the same should be made larger in order to make it more passable. Third. They do not comply with Section 8 of the mine law. Their hoisting engine has no brake sufficient to prevent over-winding, or to hold the cages in case of an accident to the machinery. The cages have no safety catches, no hoods, hand rails or anything that would furnish protection to men being hoisted or lowered in the shaft; neither have they provided safety gates on the landings. The appliances are in no particular safe, for at no time is the equipments reliable, nor is any one safe in going to and from their work. The management of this mine acknowledged their lack of necessary safety appliances. I would suggest that a reasonable time be given this company to comply with the law."

A more recent report of this mine is given by Mine Inspector S. A. Lewis, who states that the drainage and ventilation of the mine is good. In the first left heading the workings are close to old works and the weight is causing a squeeze. In order to stop this squeeze it was suggested that five of the rooms on each side be abandoned, and work out four of the rooms as soon as possible in order to induce a fall. Improvements are noted as follows: The man-ways have been cleaned, a speaking tube has been placed in the main shaft, and notices are posted at the head of the main shaft warning the employees from rid-

ing on the cages in the shaft. The ladder in the air shaft being badly worn is considered unsafe for the men to travel. The company was notified to provide a better means for their miners to go to and from their work, and also to put safety catches on their cages.

J. B. Chambers, Sup't. John Costello, Mine Boss.

KANAWHA COUNTY.

Monarch Mine.

Operated by the Monarch Coal Company, Post office, Monarch, is located on the K. & M. R. R. In the last report it was stated that the air in this mine was not well carried through the working places, and that the air courses, in some places, were obstructed by slate falls. Owing to the nature of the substrata the bottom of this mine heaves. This heaving very materially interferes with the ventilating current, so much so that the miners complained and a committee of the miners during the month of June requested a special inspection of the mine. Mr. Meade being absent at the time this communication was received from the miners, the Chief Inspector directed Mr. Pinkney, Inspector of the Third District, to make an inspection of the mine, paying special attention to the ventilation and to take with him the miners' committee and a representative of the company. On June 26th, Mr. Pinkney made an inspection of this mine and gave the following report: "As directed by you I have this 26th day of June made a special inspection of the Monarch mine situated on the Kanawha River and K. & M. R. R. at Monarch. The seam operated is known as the Cedar Grove and is about 3 ft. in thickness and has a good slate roof and soft fire clay bottom. When I made the inspection I had in company with me four miners as committee, also Mr. Quisenberry, the present Mine boss who has been employed in this capacity for a period of less than two months. In regard to the general condition of this mine I have to state that it is far from being in a satisfactory condition. The mine is at present and has been since it was opened, conducted on the double entry system, but it would seem that the management of the past has either been deficient in judgment, or has neglected to attend to the duties which ought to have been carefully guarded. I find there is at present a severe squeeze in active operation over a large

portion of the mine. In consequence of this the floor, being soft, is being gradually heaved and for a distance of about one thousand feet the return air way, which is now being used for ventilating purposes, is gradually being closed, it being all that myself and those in company with me could do to crawl along on our hands and knees for the distance above mentioned, and in many places, where some small slate falls had occurred, it was almost impossible to get through at all.

At the inner end of this distance there is a large basin of water extending, as the boss informed me, a distance of about 500 feet which seemed to be from 1 foot to 15 inches deep. From this point to the face there was a fairly good air-way. After making an examination of the air-ways I had the mine boss build a fire in the furnace, which is 3 feet 8 inches wide, and about the same to the crown of the arch, having a length of about 10 feet, with a wooden stack and shallow shaft, making in all about 30 feet. I then took a measurement of the air, about 50 feet from the furnace, which I found to be about 6000 feet per minute. I also tried to get a measurement at the innermost break-through near the head of the main entry, but on account of the large area of the place I could not ascertain the correct amount, as the current was not sufficiently strong to operate the anemometer, but judged there were about 3,000 feet passing. After a little conversation with the men and the mine boss they all agreed that the present complaint was more the result of the furnace not having been kept in operation regularly and properly attended than anything else. I cautioned the mine boss in regard to the importance of such a mode of procedure when the air-ways of this mine were in such a condition as has before been stated. He then promised, before the miners' committee and myself, he would place some one to attend regularly to the furnace until the necessary arrangements now under consideration were completed, whereby a new air-way and fan will be put in operation. I then had an interview with Mr. D. Harris, the managing partner, and suggested that he place a force fan at the mouth of No. 6 entry, which I understand is in a very good condition, but has not been worked for some time, and is connected with the present works by a recent opening, which can be made into a very good second road out. I explained the absolute necessity of making some changes at once in the ventilation, which would

be of advantage to the company and save the department the unpleasantness of having to interfere with the company's business. Mr. Harris very readily consented to give the matter his serious attention at once and have the change made as early as possible.

In the mean time if the furnace is regularly attended I am satisfied there will be very little complaint, but as I also suggested to Mr. Harris, it was my conviction that in a few months, possibly not more than four or six, the present air-way and all the places wherever there may be at present any vacancy for air to circulate, that particular section of the mine will be entirely closed, and the sooner the new air-way is established the better it will be for all parties concerned.

Very respectfully yours,

EDWARD PINKNEY,

Inspector Third District.

FIRST DISTRICT.

STEPHEN A. LEWIS, *Inspector.*

Fairmont, W. Va.

Inspection of mines from August 1st, 1897 to June 30th, 1898, in the counties of

Barbour,	Marion,	Ohio,
Brooke,	Marshall,	Preston,
Hancock,	Mineral,	Taylor,
Harrison,	Monongalia,	Tucker.

The following suggestions upon needed legislation have been made by S. A. Lewis, Inspector of the First District:

1st. A law should be enacted prohibiting the use of inferior qualities of oils for illuminating purposes in the State, and a penalty should be imposed upon any person or persons for any violation of this, either in the use of it or the sale of it for mining purposes.

2nd. It is important that the amount of explosives, including powder and dynamite, should be regulated by law.

3d. The Chief and District Inspectors of the State should be given authority to stop the use of inferior qualities of oil in the mines and the necessary apparatus should be furnished the department for making tests of oils that are used in the mines.

4th. All companies or persons operating mines in which electrical motors or rope haulage are used there should be provided a separate manway for the employes to go to and from their work.

5th. The distance between breakthroughs in headings and rooms should be specified by law. In coal which measures 6 feet in height the cross-cuts should be not greater than 75 feet

apart in the headings, and in any seam of less height than 6 feet the distance between cross-cuts should not be greater than 60 feet, and as succeeding cross-cuts are made the previous ones should be closed in a substantial manner, and a fine should be imposed for any violation of this requirement on the part of operators or miners.

6th. At all important ventilating doors which are not automatic in their opening and closing there should be stationed some person whose duty it is to open and close the doors for the passage of cars and men.

7th. All persons or companies operating mines in the State should for each nationality of persons employed in the mine have the mining laws of this State translated into a language spoken and read by said nationality and have them placed in a conspicuous place in order that all persons employed in the mine may have a chance to familiarize themselves with the mine laws.

8th. Mines ventilated by means of fire baskets or furnaces should have in constant attendance at such baskets or furnaces a person whose special duty it is to keep a brisk fire during the working hours of the mine, and at such mines as are dependent upon either of these modes of ventilation the fires should be started at least one hour before the regular time for the men to go into the mine.

9th. Coal mines where electrical currents are used or carried through the manways or traveling ways of a mine, the wires or conduits should be insulated throughout their length to prevent men from coming in contact with the naked wire.

10th. At all shaft mines there should be a substantial railing and gate at the collar of the shaft and at each landing in order to prevent material or persons from falling down the shaft. The gates in this case should be made so as to always close when the cage is absent from the landing.

11th. There should be at all times when there are men at work in the mines at least 200 cubic feet of air in circulation for each and every person employed in the mines in this State.

12th. At each mine in the State the mine boss, or some other duly authorized person, should be required once each week to take a measurement of the air at the last cross-cut in each heading in the mine and record the amount of air passing, and also the number of men employed in each section of the mine, and at the end of each month a summary of this record should be furnished the district mine inspector.

13th. In blasting coal, slate or rock inside of a mine a copper-pointed needle and tamping bar should be used.

14th. Inexperienced miners should not be placed in charge of any important or dangerous underground work.

15th. Before being permitted to hold the position as mine boss persons should be required to undergo an examination before an examining board in order to show their qualifications for the duties of this important position.

SECOND DISTRICT.

JERRY MEADE, Inspector,
Charleston.

Inspection of the mines in the counties of
Kanawha, Mason, Putnam.

CHARLESTON, W. VA., June 30th, 1898.

JAMES W. PAUL, Esq.,
Chief Mine Inspector,
Charleston, W. Va.

SIR:—I hereby respectfully submit to you my Annual Report for the year ending on this date upon the sanitary condition of the mines and improvements made for the protection of the health and safety of the miners in the Second Mining District of this State.

During the year fans were constructed at the following mines: Hartford City Salt and Coal Co.: at the South mine of the Winifrede Coal Company, and a new fan at the North mine has been erected to replace the one destroyed by fire on May 17th, at the Riverside mine; also at the Acme mine of the Stevens Coal Company.

Furnaces were built at the following places: Brabbin mine, on Lens Creek; Camden Clay Co.'s mine, and at the Quincy mine.

The following new openings were made: Cedar Grove seam at Coalburg by the Robinson Coal Company. Five drifts were opened, the Nos. 4 and 5 openings are in operation at present, and a mine that was abandoned many years ago has been re-opened by the Liverpool Salt and Coal Company, near Hartford City.

The prospects of coal operations on the line of the Charleston, Clendennen & Sutton Railroad, in Clay County, where several openings have been made, showed good coal.

The Charlmore Coal Company, on Lens Creek, have recently built an electrical plant near their mine, and are working three Morgan-Gardner electrical machines.

There are at present nine fans in the District, not including that part of Kanawha County east of Coalburg.

There are twenty-four furnaces at commercial mines, and forty-three in all, including small mines that have to depend on natural ventilation.

There are three locomotives used in hauling coal out of mines, and six others of various sizes used for hauling coal from the mine to the railroad and river tipples.

There are two electrical motors used for hauling coal—one at the New Calderwood mine, of the Campbells Creek Coal Company, and one at the Keystone mine, of the Stevens Coal Company.

The Winifrede Coal Company erected a coal washer near their river tipple for the purpose of washing impurities from nut and slack coal. The washer gives perfect satisfaction, and the coal is much improved by the process. There is but one more coal washer in the District—that at the Marmet-Smith tipple, at Raymond City.

There have been many improvements made in the drainage of the mines notably among these are the Spring Fork mine, of the Campbells Creek Coal Company and the South mine of the Winifrede Coal Company. There were abandoned during the year the Dickinson mine at Malden, and the Liverpool Salt and Coal Company's mine at Hartford City. There are 20 small mines in Mason County, 16 of which were visited during the year; six small mines in Putnam County and 18 in Kanawha County that were visited once during the year. The number of men employed in these mines ranged from 1 to 9; and it is hard to comprehend why so large a number of men should be exempt from the protection afforded in our mining laws, since the dangers to this class of miners are generally greater for the reason that inexperienced men are employed and men with little mining experience have charge of the mines. Accidents occurring in these small mines are never reported for the reason that the law does not apply to them; for the same reason they decline to furnish even an estimate of their product.

There are several mines in the district which do not comply with Section 6 of the mining laws, since the second opening is used for a furnace outlet. In my opinion this is not in compliance with the law. Section 10 of the mining laws gives more dissatisfaction and should be changed in order to do away with

the contention that constantly arises over the distance between break-throughs on entries and rooms. I would suggest that Section 10 be changed so as to provide as follows:

In a seam 6 feet thick break-throughs should be 120 feet apart in entries and rooms; in a 5 foot seam 100 feet apart, in a 4 foot seam 80 feet apart; in a 3 foot seam 60 feet apart and in a 2 foot seam 40 feet apart, and then when the second break-through is made the first be closed at once and made as near air tight as possible. If this system is once adopted it will fill a long felt want at the mines.

With these changes in Section 10, and with a reasonable penalty imposed on the miners as well as the operators for a violation of any of the provisions, the ventilation of the mines would be very much improved. Some miners may say they do not want such a change for the reason that they are not paid for driving break-throughs, this is a matter over which the mine laws have no control and should be settled between the employer and the employe. In many mines the system in timbering rooms is very poor.

In many places posts are set against the roof without any caps; this renders the post practically useless as the roof frequently crumbles around the top and adds to the danger to the miner. This would not be the case if a cap 4 or 5 inches in thickness is placed on top of the post.

The oil used in the miners' lamps in this district, is generally of a poor quality giving off large volumes of smoke. Cotton seed oil mixed with kerosene and black-strap is frequently used. This practice cannot be too severely condemned, since the gas and smoke evolved is very injurious to the miner. A law should be enacted to prevent the use of these inferior oils.

In mines where locomotives or electrical motors are used for hauling coal along roads traveled by men the speed should be regulated to 6 miles per hour. A plea of good track may be made to justify a higher rate of speed, but one broken wheel would derail an entire trip and cripple or kill any men that may be passing at that time regardless of good roads.

With but one exception my official relations have been pleasant and requests and suggestions made by me were generally promptly complied with. In conclusion I desire to thank you for your able assistance and many courtesies extended to me during the past year.

Yours respectfully,

JERRY MEADE,
Inspector for Second Dist.

THIRD DISTRICT.

EDWARD PINKNEY, *Inspector*,

Montgomery.

Inspection of the mines in the counties of
Fayette and Raleigh.

Montgomery, W. Va., July 30, 1898.

HON. JAMES W. PAUL, *Chief Mine Inspector*.

Charleston, W. Va.

Dear Sir:—I have the honor to submit to you the report of the mines in the Third District for the year ending June 30th, 1898.

My commission is dated April 12th, 1898, and I have had charge of the office as District Inspector of mines for this Third District since that time, a little less than the last quarter of the year.

During this brief period of my associations with both operators and miners I have received courteous treatment from all, and with few exceptions all suggestions made in the way of improvements have been pleasantly received, and I have no doubt will be carried out. The business depression combined with the low prices for coal of previous years, and the economy which operators have been obliged to exercise in every department of the mining industry, found many of the mines in a condition much below the standard that could be desired, and far from being equipped to the satisfaction of the owners. However during the latter part of the year ending, the coal business has been much better and the outlook for the present is much brighter, and many substantial improvements have recently been made and many more are in progress. The permanent improvements which have been made are as follows:

Six new fans have been installed during the past year at the following mines: Diamond St. Clair, No. 2, Vulcan, Red Ash,

Sun and Central. There have been three tailrope haulage plants installed, one each at New River South Side mine, Sugar Creek and Central mines. The Harvey Coal Company has rebuilt its plant which was recently destroyed by fire. The Greenwood Coal Company has recently added a new 8 ton steam locomotive to its plant. A new tippie and bins have been built at Ballinger No. 1 and one at the Blume mine and other important improvements. Eighty-four new coke ovens have been put in operation at Red Ash, and the Longacre Company has in course of construction 100 coke ovens. Several new openings have been made at the various mines and one air shaft sunk at the Sun mine. There is now in operation for haulage purposes by the various coal companies of this the Third District at present date 16 tailrope plants, 9 steam locomotives, 4 electric motors, 3 endless rope plants and one pneumatic locomotive.

The following companies are operating the electric mining machines: Eureka Block, 3 machines; Great Kanawha Colliery Company, 2 machines; St. Clair, 2 machines; Quinnimont Coal Company, 2 machines; and the Elmo Coal Company are experimenting occasionally with one designed by Capt. J. L. Beury. Compressed air mining machines are being operated at the following mines: Four at the Red Ash, 3 at Brooklyn, and 2 at the Vulcan mines. There are at present 68 mines in operation in this district, including Longacre and South Caperton, which have been opened during the past year, all of which are in Fayette County, except the Royal mine, which is in Raleigh County. I have made 75 inspection visits to the mines since my appointment, including twelve on account of fatal accidents, and one special visit to the Monarch mine, situated in Kanawha County and now in the Second District.

The Coal Valley Mining Company's mine, at Montgomery, has been worked out and abandoned the latter part of this year.

The number of fatal accidents in this district during the year was 26 and the number of persons injured 17. The principal manner in which these accidents, both fatal and non-fatal, occurred was by falls of slate immediately at the face of the room or entry where the unfortunate persons were engaged in their work. A thorough investigation was made of each accident at the time it occurred. The inquiry developed the fact that in almost every instance the responsibility not only rested with the un-

fortunate man, but also demonstrated beyond doubt that the majority of those accidents occurred to our old and experienced miners. This should remind our miners of the necessity of being more careful and taking less of those unnecessary risks which many are in the habit of doing. It is plain that for a reduction in the number of accidents which are directly caused by errors of judgment, or carelessness, we can only look to the workmen or those who are in daily supervision over them. No matter what safeguards may be prescribed by law the miner must use methods and means which common sense will dictate for his own protection. However there is one class of accidents in which there may, to a certain degree, be some source of prevention adopted. I refer to those accidents caused by miners being blown up, and in some instances fatally injured, by recklessly making small holes in kegs of powder by striking a pick point into the iron keg. This is quite frequently done by miners not only at the mines but also at their homes, and is done for the purpose of making a small hole close to the edge of the keg, it being more convenient for them to fill their cartridges in this manner as the hole already in the keg is not only too large for this purpose but is a little inconvenient to open and close. I think if the operators and other parties handling powder for mining purposes would have the powder companies to place a small hole in the end of the kegs close to the side for this purpose it would help to remedy this evil.

The miners, as a general rule, object to buying their powder in small quantities, as it is a well-established fact that all dealers in powder charge much more for this article of commerce when sold in small quantities.

The same perplexing questions still confront us and cause much dissatisfaction among the miners, in reference to the proper distance which breakthroughs ought to be made in the various mines; also, in regard to the oils used in the mines for lighting purposes.

In regard to the breakthrough question, from many years practical experience as outside manager, combined with the opinions of a number of our most efficient and best informed inside foremen in my District, whose opinions I have solicited on this question during my brief period of service as Inspector, I would suggest that Section 10 of our mine law be changed and a clause inserted therein designating that all places ad-

vancing to the rise, either rooms or entries under ordinary circumstances, there shall be a breakthrough made every one hundred feet, or closer if so needed, for air, and those going to the dip not more than one hundred and fifty feet, or closer if so needed, and all breakthroughs not in actual use as airways to be properly closed up.

As we have nothing in our present mining laws bearing on the use of oils for illuminating purposes it is very desirable that something should be done along this line. In almost every mine there is more or less oil of a very unhealthful character in use, especially by the drivers and other day laborers. Much of this practice could be abolished by the operators if they would strictly prohibit their employes from using blackstrap, which they mix with kerosene oil. In mines where natural ventilation is depended upon this is particularly injurious, from the fact that during the months when the temperature outside and inside of the mine is about equal and is constantly changing, the volume of air outside of the mine is very sluggish and changes its course first one direction and then another, at intervals, for many hours during the day in those months. The consequence is, that the injurious product produced by the use of this class of illuminating material never fairly leaves the mine and the mine employe breathes it over and over, in many instances, all day long. A penalty imposed on the operators and workmen alike for an offense of this kind, for allowing his workmen to use what he buys for lubricating purposes, might assist to remedy this evil.

I would also suggest that portion of Section 10 of our mining laws relating to doors be changed and the following inserted: That all doors erected on main haulways and other important points for ventilating purposes, shall be built of plank, made in a substantial manner, and hung so as to close themselves. My reason for advocating this change is because there are some mines that use almost exclusively canvass for ventilating purposes, and in many instances these canvasses are very much torn by the cars passing and repassing, and allow the air currents to pass off in the directions otherwise than the proper ones.

In regard to mines where fire-damp exists and may, in the future, be expected to exist, and especially those below water level and those whose surroundings plainly indicate they will

have no more openings unless by sinking shafts at considerable expense, I am of the opinion that a provision should be made in our mining laws whereby at least one line of stoppings of a permanent character should be built in this class of mines out of some kind of rock or bricks and mortar from the inlet to the face of the entry. This would insure the full current of air to reach the advancing work where there is most danger to be apprehended. My reason for expressing this opinion is caused by my observations made in many mines inspected where large fans have been erected and the miners are only enjoying a small per cent. of the effective power. From the simple fact that most of the stoppings are built of loose rock and fine dirt, and in some instances poplar plank, which soon decays and becomes rotten, through which the air leaks in large quantities. In no instance during my short experience as Mine Inspector have I found, even where large fans have been built, more than one-third of the volume produced by those fans reach the face of the workings and oftener as little as one-fourth.

It is very true that many of our mines are constantly holing out to daylight, but there are many others in this Third District and elsewhere in the State which will be constantly under cover and will have no more openings unless shafts be sunk.

There are other and important reasons why a line of permanent stoppings should be erected along the line of the main entries. It is a well established fact that in most of our coal operations the main entry is a permanent haulway and air-course from the time the mine is opened until it is exhausted. Or, in other words, is in all mines advancing into the solid mountain or unbroken ground, and more especially those under water level. The main entries are located to remain permanent and in more active service when the coal on the cross entries has been worked out and abandoned.

There are twenty-two mines in this District ventilated by fans of various dimensions, ranging from 8 to 10 feet in diameter. In these twenty-two mines there are employed about 2,295 men and 228 mules.

The total combined volume of air, as measured at the various inlets, was found to be 438,000 cubic feet per minute, or about 173½ feet for each man and mule.

There are twenty-two mines ventilated by furnaces of various dimensions. In these twenty-two mines there were also about

1,295 miners and 191 mules employed. The total combined volume of air, as measured at the various inlets, was found to be 163,000 cubic feet per minute, or about 110 feet per man and mule.

There are twenty-two mines ventilated by natural means. In these twenty-two mines there are 2,019 men and 268 mules employed. The total combined volume of air, measured at the various inlets, was found to be 72,600 cubic feet per minute, or about 75 cubic feet per man and mule.

If reference is made to the difference existing in the different systems of ventilation, it will be very readily seen how necessary it is for the operators of our district, who are ventilating their mines by the natural process, to make some effort and improve their system of ventilation in the near future.

Hoping the foregoing remarks and suggestions are in order, I desire to thank miners and mine officials for their courteous treatment and express my gratitude for your many kindnesses. Hoping our future relations will be as pleasant as those of the past, I remain

Very respectfully yours,

EDWARD PINKNEY,

Inspector Third District.

FOURTH DISTRICT.

WM. J. PREECE, *Inspector*,

Coaldale, Mercer County.

Inspection of the mines in the counties of Mingo, McDowell and Mercer, from August 1st, 1897 to June 30th, 1898.

HON. JAMES W. PAUL,
Chief Mine Inspector,
Charleston, W. Va.

SIR—

I have the honor to present for your consideration my report as Inspector of Mines for the Fourth District for the year ending June 30th, 1898.

Regarding ventilation, there is a general improvement in the methods in use for conducting the air; the old plank brattices at many of the large mines in the district have been replaced with brick and stone laid in mortar. Several fans have been installed in the place of furnaces. Various systems of haulage are used, such as air motors, electric motors, tail rope, endless rope and the steam locomotive. The drainage is also much improved.

During the months of July, August and September of 1897 there was a little suspension of a few mines owing to the men coming out on a strike, which was claimed to be in sympathy with the strikers in neighboring States. During the months of May and June of 1898 there was a suspension of business in Mercer and McDowell Counties on account of an epidemic of small-pox, which necessitated a quarantine.

The miners in this district do their own timbering, except where it is necessary to set double timbers, when the roadmen or others lend assistance. The miners are careless and negligent about setting their timbers at the proper time. Frequently men work under dangerous roof in order to finish load-

ing a car, and it is not infrequent that the men are killed while knowingly working under dangerous roof.

At a number of mines in the district inferior qualities of oil are used in the miners' lamps. This vitiates the air and makes it unhealthful for the men in the mine. Where a good current of air is in circulation the ill effects of the oil are not so much felt, but where the break-throughs are at long distances apart it is hard to properly ventilate a mine. The distance between break-throughs not being specified by law, is the source of a great deal of complaint on the part of the miners. Should this matter be settled by law the mines would be much better ventilated. For this district I would say that where there is no gas, and under ordinary circumstances the cross-cuts in entries could be 100 feet and in rooms 150 feet apart, provided the cross-cuts are closed in a substantial manner as new ones are made in-by.

During the year I have made 160 regular inspections, not including the times that the mines were visited for the purpose of investigating accidents.

Very respectfully,

WM. J. PREECE,

Inspector of Fourth District.

Coaldale, W. Va., Dec. 1st, 1898.

CHAPTER XV.

Directory of and Report Upon Condition of the Mines.

The following table gives the Directory of each mine in the State, and the name and thickness of seam worked; how ventilated, number of men employed inside of mine, and the condition in which the mines were found upon inspection.

The condition of the mines are expressed as *good*, *fair* or *bad*. To go into a detailed description of each mine in the State would tax the limits of this report. Such inspection record is on file in the office of the Chief Mine Inspector and may be seen upon request of any citizen of the State. Great care has been exercised to classify the mines in their true positions.

1. Wherein a mine is found to comply with the requirements of the law it is classified as in *good* condition.

2. Wherein a mine has good ventilation, poor drainage,

good timbering, muddy roads, such as to render the mine healthful but slightly dangerous, it is classified as in *fair* condition.

3. Insufficient ventilation, wet roads upon which miners have to travel, leaky stoppings and lack of timbering are sufficient to classify a mine as in *bad* condition.

In the column after the classification will be found wherein the mine is deficient.

*Condition in Which the Mines were Found Upon Inspections
Made for the Year Ending June 30, 1898.*

FIRST MINING DISTRICT, STEPHEN A. LEWIS, INSPECTOR.

No.	COUNTY.	Name of Mine.	Name of Operator.	Condition of Mine	Deficient In
1	Barbour.....	Junior.....	Junior Coal Co.....	Fair.....	Ventilation.....
2	Barbour.....	Phillippi.....	Phillippi Coal Mining Co.....	Good.....	.....
3	Barbour.....	Arden.....	South Arden Coal Co.....	Good.....	.....
4	Brooke.....	Blanche.....	Panhandle Coal Co.....	Fair.....	Ventilation.....
5	Brooke.....	Gilchrist.....	Gilchrist Coal Co.....	Bad.....	Ventilation & Drain
6	Brooke.....	Wellsburg.....	J. W. M. Carmichael.....	Good.....	.....
7	Hancock.....	Sligo.....	Mack Mfg Co.....	Good.....	.....
8	Hancock.....	Marquet.....	W. S. Marquet.....	Good.....	.....
9	Hancock.....	McElfresh.....	McElfresh Clay Mfg Co.....	Fair.....	Vent. & no sec. open.
10	Harrison.....	Bingamon.....	Bingamon C. & C. Co.....	.....	.....
11	Harrison.....	Coulson.....	Coulson C. & C. Co.....	Good.....	.....
12	Harrison.....	Farnum.....	Pinnickinnick C. & C. Co.....	Good.....	.....
13	Harrison.....	Jackson No. 1.....	Pinnickinnick C. & C. Co.....	Good.....	.....
14	Harrison.....	Fall Run No. 2.....	Pinnickinnick C. & C. Co.....	Fair.....	Drain, sec. opening.
15	Harrison.....	Briar Hill No. 1.....	Briar Hill C. & C. Co.....	Good.....	.....
16	Harrison.....	Glen Falls.....	Glen Falls C. & C. Co.....	Fair.....	Ventilation & Drain
17	Harrison.....	Adamston.....	Adamston C. & C. Co.....	Good.....	.....
18	Harrison.....	Howard.....	Howard C. & C. Co.....	Good.....	.....
19	Harrison.....	Depard No. 2.....	Depard Gas Coal Co.....	Fair.....	Ventilation.....
20	Harrison.....	Mt. Clare 2 & 3.....	Mt. Clare Coal Co.....	Bad.....	Ventilation & Drain
21	Harrison.....	Findlay.....	Findlay & Co.....	Bad.....	Ventilation.....
22	Harrison.....	Dolan.....	Haggett, Playford & Seaton.....	Good.....	.....
23	Harrison.....	Enterprise.....	Samuel Hines & Co.....	Fair.....	Ventilation.....
24	Marion.....	New England.....	West Fairmont C. & C. Co.....	Good.....	.....
25	Marion.....	W. Fair. Shaft.....	West Fairmont C. & C. Co.....	Good.....	.....
26	Marion.....	Gaston.....	Gaston Gas Coal Co.....	Good.....	.....
27	Marion.....	Montana.....	Montana C. & C. Co.....	Good.....	.....
28	Marion.....	Mason.....	Mason C. & C. Co.....	Good.....	.....
29	Marion.....	Briar Hill No. 2.....	Briar Hill C. & C. Co.....	Good.....	.....
30	Marion.....	Palatine.....	Palatine Coal Co.....	.....	.....
31	Marion.....	Aurora.....	Newburg Orrel C. & C. Co.....	Good.....	.....
32	Marion.....	Kling.....	Va. & Pgh C. & C. Co.....	Fair.....	Ventilation.....
33	Marion.....	Monongah No 2.....	Monongah C. & C. Co.....	Good.....	.....
34	Marion.....	Monongah No 3.....	Monongah C. & C. Co.....	Good.....	.....
35	Marion.....	Chieftan.....	J. A. Clark C. & C. Co.....	Good.....	.....
36	Marion.....	Prebhard.....	Clark C. & C. Co.....	Fair.....	Roads dusty.....
37	Marion.....	Bryan.....	Bryan & Loller.....	Good.....	.....
38	Marion.....	Anderson.....	Clark C. & C. Co.....	Good.....	.....
39	Marion.....	Worthington.....	Worthington C. & C. Co.....	Fair.....	Ventilat'n, brattices
40	Marshall.....	Boggs' Run.....	Boggs Run M. & Mfg Co.....	Fair.....	Ventilation.....
41	Marshall.....	Benwood Mill.....	Wheeling Steel & Iron Co.....	Bad.....	Drain, & timbering.
42	Marshall.....	Glendale Shaft.....	Glendale C. Co.....	Fair.....	See special report.
43	Marshall.....	Moundsville Shaft.....	Moundsville Coal Co.....	Bad.....	See special report.
44	Mineral.....	Windom B. Vein.....	Davis C. & C. Co.....	Good.....	.....
45	Mineral.....	Windom Gas.....	Davis C. & C. Co.....	Fair.....	Drainage.....
46	Mineral.....	Windom 4 ft.....	Davis C. & C. Co.....	Good.....	.....
47	Mineral.....	Klondike.....	Davis C. & C. Co.....	Good.....	.....
48	Mineral.....	Hampshire.....	Davis C. & C. Co.....	Good.....	.....
49	Mineral.....	Elk Gar. No. 6.....	W. Va. C. & P. Ry. Co.....	Fair.....	Vent. on 5th right en
50	Mineral.....	Elk Gar. No. 7.....	W. Va. C. & P. Ry. Co.....	Good.....	.....
51	Monongalia.....	Opekiska.....	Opekiska C. & C. Co.....	Fair.....	Ventilation.....
52	Monongalia.....	Ceechwood.....	Patterson-Reisinger C & C Co.....	Good.....	.....
53	Ohio.....	Manch. & Whit.....	T. E. Kasley & Son.....	Good.....	.....
54	Ohio.....	Richland.....	John P. Gilchrist.....	Good.....	.....
55	Ohio.....	Yochum.....	Yochum Coal Co.....	Fair.....	No 2d open. for men
56	Ohio.....	La Belle.....	La Belle Iron Works.....	Good.....	.....
57	Ohio.....	Elm G've Shaft.....	Elm Grove Coal Co.....	Bad.....	See special report.
58	Preston.....	Austlin.....	Austlin Coke Works.....	Good.....	.....
59	Preston.....	Tunnelton.....	Merchants Coal Co.....	Fair.....	Ventilation.....
60	Preston.....	Kingwood.....	F. C. Todd, Esq.....	Fair.....	Ventilation & Drain
61	Preston.....	Oakland.....	Oakland C. & C. Co.....	Bad.....	Drain, & timbering.
62	Taylor.....	Fuhey.....	Grafton C. & C. Co.....	Good.....	.....
63	Taylor.....	Gates.....	Gates C. & C. Co.....	Good.....	No 2d opening.
64	Taylor.....	Flemington.....	Flemington C. & C. Co.....	Good.....	.....

*Directory of Mines, Names of Coal Beds, Kind of Ventilation
and Total Number of all Kinds of Inside Employees
For the Year Ending June 30, 1898.*

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked Name.	Thickness Ft. in.	Kind of Ventilation.	Total Inside Employees.	No.
R. G. Haskins.....	H. C. Haskins.....	Junior.....	Freeport.....	5-6	Bask	56	1
D. H. Poling.....	D. H. Poling.....	Philippi.....	Freeport.....	6-7	Furn.....	12	2
Geo. C. Lee.....	Geo. C. Lee.....	Arden.....	Up. Freeport	5-10	Furn.....	22	3
Lee O. Smith.....	Thos. Ritson.....	Standard.....	No. 7.....	1-2	Furn.....	69	4
A. Gilchrist.....	Wm. Gilchrist.....	Lazearville.....	Pittsburg.....	5-7	Furn.....	34	5
J. W. M. Carmichael	Posey Cheek.....	Wellsburg.....	Pittsburg.....	5-7	Furn.....	20	6
S. G. Gillard.....	John Chromer.....	N. Cumb'ld.....	Pittsburg.....	3-7	Fan.....	31	7
W. G. Marquet.....	Wilson Holmes.....	N. Cumb'ld.....	Pittsburg.....	4-7	Nat.....	46	8
Harry Cooper.....	Samuel Glazer.....	Penrith.....	Pittsburg.....	3-7	Nat.....	8	9
F. W. McIntire.....	E. W. Freeman.....	Fairmont.....	Pittsburg.....	8-10	Furn.....	34	10
John Coulson.....	John Coulson.....	Enterprise.....	Pittsburg.....	8-10	Furn.....	27	11
Joseph L. Dixon.....	T. H. Roberts.....	Clarksburg.....	Pittsburg.....	9-12	Furn.....	64	12
W. W. Willis.....	Mathew Mannix.....	Clarksburg.....	Pittsburg.....	9-12	Furn.....	28	13
W. W. Willis.....	Bird Flaherty.....	Clarksburg.....	Pittsburg.....	7-9	Furn.....	70	14
C. W. Watson.....	Peter Gill.....	Fairmont.....	Pittsburg.....	9-10	Furn.....	25	15
J. F. Jones.....	C. H. Vickers.....	Clarksburg.....	Pittsburg.....	8-10	Furn.....	23	16
J. M. Kelley.....	J. M. Kelly.....	Clarksburg.....	Pittsburg.....	6-8	Furn.....	86	17
John Temple.....	Jas C. Ward.....	Wilsonburg.....	Pittsburg.....	9-10	Nat.....	45	18
Mord Lewis.....	Jos. W. Lutsletter.....	Clarksburg.....	Pittsburg.....	8-10	Nat.....	21	19
J. H. Hanson.....	Lee Mitchell.....	Mt. Clare.....	Pittsburg.....	6-8	Nat.....	14	20
C. P. Findlay.....	O. Anglin.....	Mt. Clare.....	Pittsburg.....	7-8	Nat.....	1	21
Fuller Hogsett.....	Jas. E. Carter.....	Uniontown, Pa.	Pittsburg.....	7-8	Nat.....	224	22
W. E. Colburn.....	H. S. Colburn.....	Enterprise.....	Pittsburg.....	8-10	Fan.....	176	23
W. B. Brooks.....	S. C. Wallace.....	Fairmont.....	Pittsburg.....	7-8	Fan.....	180	24
W. B. Brooks.....	J. J. Brennen.....	Fairmont.....	Pittsburg.....	7-8	Fan.....	213	25
S. L. Watson.....	G. B. Brown.....	Fairmont.....	Pittsburg.....	7-8	Fan.....	56	26
J. C. Gaskill.....	C. E. Gaskill.....	Fairmont.....	Pittsburg.....	7-8	Fan.....	40	27
A. B. McDonald.....	Presley Robinson.....	Fairmont.....	Pittsburg.....	7-8	Fan.....	40	28
C. W. Watson.....	J. H. Bainbridge.....	Fairmont.....	Pittsburg.....	7-8	Nat.....	30	29
M. D. Orr.....	J. C. McKinney.....	Palatine.....	Pittsburg.....	8-10	Furn.....	53	30
M. D. Orr.....	J. M. Henry.....	Palatine.....	Pittsburg.....	8-10	Fan.....	446	31
R. M. Hite.....	R. M. Hite.....	Fairmont.....	Pittsburg.....	7-8	Fan.....	90	32
A. J. Ruckman.....	S. A. Farnes.....	Monongah.....	Pittsburg.....	7-8	Fan.....	62	33
A. J. Ruckman.....	A. E. Reppert.....	Monongah.....	Pittsburg.....	7-8	Furn.....	30	34
George Colburn.....	George Colburn.....	Fairmont.....	Pittsburg.....	7-8	Furn.....	62	35
T. S. Haymond.....	John Prunty.....	Fairmont.....	Pittsburg.....	7-8	Bask.....	20	36
A. J. West.....	Joseph Now.....	Everson.....	Pittsburg.....	7-8	Nat.....	72	37
T. S. Haymond.....	John F. Bratt.....	Fairmont.....	Pittsburg.....	7-8	Fan.....	53	38
Philip King.....	Eugene Miller.....	Wheeling.....	Pittsburg.....	5-6	Fan.....	29	39
Henry Riddle.....	Henry Riddle.....	Wheeling.....	Pittsburg.....	5-6	Furn.....	70	40
F. H. Blake.....	J. E. Wallace.....	Glendale.....	Pittsburg.....	5-6	Fan.....	60	41
John W. Berry.....	E. C. Pickett, Jr.....	Moundsville.....	Pittsburg.....	6-8	Nat.....	22	42
O. Tibbetts.....	Jas. B. Rankin, Sr.....	Savage.....	Pittsburg.....	4-8	Nat.....	55	43
O. Tibbetts.....	Jas. B. Rankin.....	Savage.....	Pittsburg.....	4 Feet.....	1-4	71	44
O. Tibbetts.....	Peter Messenger.....	Savage.....	Pittsburg.....	4 Feet.....	1-4	64	45
O. Tibbetts.....	Jas. B. Rankin.....	Savage.....	Pittsburg.....	6 Feet.....	5-8	253	46
O. Tibbetts.....	T. H. Tibbetts.....	Savage.....	Pittsburg.....	4-6	Nat.....	47	47
W. T. Blackiston.....	Foster Wilson.....	Elk Garden.....	Pittsburg.....	8-10	Nat.....	59	48
W. T. Blackiston.....	Foster Wilson.....	Elk Garden.....	Pittsburg.....	7-8	Nat.....	29	49
W. E. H. Crawford	Jas. Henderson.....	Opekiska.....	Pittsburg.....	5-7	Nat & fan	19	50
R. I. Patterson.....	William Reid.....	Beechwood.....	Pittsburg.....	5-7	Furn.....	49	51
R. H. Kasley.....	James Young.....	Wheeling.....	Pittsburg.....	5-6	Furn.....	9	52
A. Gilchrist.....	John Aitken.....	Wheeling.....	Pittsburg.....	5-6	Furn.....	13	53
John Yochum.....	John Yochum.....	Wheeling.....	Pittsburg.....	5-6	Furn.....	67	54
C. A. Robinson.....	Christian Becker.....	Wheeling.....	Pittsburg.....	5-6	Fan.....	52	55
J. B. Chambers.....	C. Welskner.....	Elm Grove.....	Pittsburg.....	4-8	Furn.....	105	56
Geo. C. Shaw.....	J. M. Whitaker.....	Austin.....	Up Freeport	4-6	Furn.....	55	57
A. J. Bonafield.....	Geo. Cummings.....	Tunnelton.....	Up Freeport	4-6	Furn.....	9	58
F. C. Todd.....	John M. Henry.....	Kingwood.....	Up Freeport	4-6	Nat.....	60	59
Robt. I. Anderson.....	E. Adams.....	Co. rinth.....	Up Freeport	4-6	Nat.....	36	60
John W. Fahey.....	John W. Fahey.....	Grafton.....	Pittsburg.....	8-10	Nat.....	110	61
Wm. T. Gates.....	David Williamson.....	Simpson.....	Pittsburg.....	8-10	Fan.....	62	62
James Stirrat.....	Solomon Walter.....	Flemington.....	Pittsburg.....	8-10	Fan.....	63	63

*Condition in which the Mines were Found Upon Inspections
Made for the Year Ending June 30, 1898.*

FIRST MINING DISTRICT, STEPHEN A. LEWIS, INSPECTOR.

No.	COUNTY.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient In.
64	Taylor.....	Tyrconnell.....	Newburg Orrel C. & C. Co....	Good	.....
65	Tucker.....	Douglass No. 1	Cumberland Coal Co.....	Fair..	Ventil'n & drainage.
66	Tucker.....	Douglass No. 3	Cumberland Coal Co.....	Fair..	Ventil'n & drainage.
67	Tucker.....	Thos Drift No. 1	Davis C. & C. Co.....	Good	.....
68	Tucker.....	Thos Drift No. 2	Davis C. & C. Co.....	Good	.....
69	Tucker.....	Thomas Shaft..	Davis C. & C. Co.....	Fair..	Ventil'n & drainage.
70	Tucker.....	Coketon No. 1..	Davis C. & C. Co.....	Good	.....
71	Tucker.....	Coketon No. 3..	Davis C. & C. Co.....	Fair..	Ventil'n & drainage.
72	Tucker.....	Coketon No. 2..	Davis C. & C. Co.....	Fair..	Ventilation.

*Directory of Mines, Names of Coal Beds, Kind of Ventilation
and Total Number of all Kinds of Inside Employees
for the Year Ending June 30, 1898.*

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked, Name.	Thickness ft., in.	Kind of ven- tilation.	Total inside Employees.	No.
J. H. Henry.....	Robert Love.....	Tyrconnel...	Pittsburg....	8-	Nat.....	57	64
J. B. Jenkins.....	Edward Pill.....	Albert.....	Kittau.....	6-	Fans & N	80	65
J. B. Jenkins.....	Edward Pill.....	Albert.....	Kittau.....	6-	Nat.....	10	66
Geo. Martin.....	Hiram Cottrell.....	Thomas.....	Up. Freept.	7-6	Fan.....	324	67
Geo. Martin.....	Clarence Bice.....	Thomas.....	Up. Freept.	7-6	Gra te...	28	68
Geo. Martin.....	Geo. Jenkins.....	Thomas.....	Lo. Kittau.	6-6	Ex ste'm	108	69
John C. Brydon.....	A. G. Smith.....	Coketon.....	Lo. Kittau.	6-	Nat.....	5	70
John C. Brydon.....	James Luzader.....	Coketon.....	Lo. Kittau.	6-	Fan.....	254	71
John C. Brydon.....	A. G. Smith.....	Coketon.....	Lo. Kittau.	3-6	Fan.....	135	72

*Condition in Which the Mines Were Found Upon Inspections
Made for the Year Ending June 30, 1898.—Continued.*

SECOND MINING DISTRICT, JERRY MEADE, INSPECTOR.

No.	COUNTY.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient In.
73	Kanawha...	Graham.....	Elk River Mining Co.....	Bad..	Ventil'n & timber'g.
74	Kanawha...	Riley.....	Riley & Copenhaver.....	Fair..	.....
75	Kanawha...	Cobb.....	Horner & Taylor.....	Fair..	.....
76	Kanawha...	Falling Rock.....	Falling Rock Cannel Coal Co.....	Good	No map of mine.
77	Kanawha...	Elk River.....	J. B. Carson.....	.....	.....
78	Kanawha...	Peacock.....	W. G. Watson & Son.....	.....	.....
79	Kanawha...	Blythe.....	Elk River Coal & Mining Co.....	Fair..	No map no 2d op, v'n
80	Kanawha...	Sycamore.....	W. C. Watson & Son.....	Good	.....
81	Kanawha...	Quincy.....	Quincy Coal Co.....	Fair..	Ventilation.
82	Kanawha...	Calderwood.....	Campbells Creek Coal Co.....	Fair..	No caps on posts.
83	Kanawha...	Spring Fork.....	Campbells Creek Coal Co.....	Fair..	Timber mach rooms
84	Kanawha...	Charlmore No. 1.....	Charlmore Coal Co.....	Good	.....
87	Kanawha...	Brabbin.....	Brabbin Coal Co.....	Bad..	Ventilation, no map
88	Kanawha...	Lens Creek.....	Lens C C & Co, H B Smith Rec.....	Good	.....
90	Kanawha...	Blk Band No. 1.....	Big Blk C Co, J Renshaw Rec.....	Fair..	Ventilation.
91	Kanawha...	Blk Band No. 2.....	Big Black Band C. Co.....	Good	.....
92	Kanawha...	North.....	Winifrede Coal Co.....	Fair..	Ventilation.
93	Kanawha...	South.....	Winifrede Coal Co.....	Fair..	Ventilation.
94	Kanawha...	Wrightsville.....	Winifrede Coal Co.....	.....	.....
95	Kanawha...	Middle Drift.....	Winifrede Coal Co.....	Fair..	Ventilation.
98	Kanawha...	Black Diamond.....	Blk Dim'nd & Kan Splint C Co.....	Bad..	Ventilation.
100	Kanawha...	Bl Hole, Coalb 3.....	Robinson C Co N Robinson Re.....	Fair..	Ventilation.
101	Kanawha...	Coalbg Nos 4 & 5.....	Robinson C. Co.....	Good	.....
102	Kanawha...	Ronda.....	Coalburg Colliery Co.....	Good	Brk troughs far apt
103	Kanawha...	Empire.....	Stevens Coal Co.....	Good	.....
104	Kanawha...	Keystone.....	Stevens Coal Co.....	Good	.....
105	Kanawha...	Acme.....	Stevens Coal Co.....	Good	Brk troughs far apt
106	Kanawha...	Peabody.....	Peabody Coal Co.....	Fair..	Drainage.
107	Kanawha...	East Bank.....	McCallister & Co.....	Bad..	Ventilation.
108	Kanawha...	Black Cat.....	The Kanawha Splint C.....	Good	.....
109	Kanawha...	Monarch.....	Monarch Coal Co.....	Bad..	See special report.
110	Kanawha...	Big Mountain.....	Big Mountain Mining Co.....	Fair..	.....
111	Kanawha...	Big Mount 1 & 2.....	Big Mountain Mining Co.....	Fair..	Drainage.
114	Kanawha...	C. Grove & Chlg.....	Staunton Coal Co.....	Fair..	.....
115	Kanawha...	Staunton No. 1.....	Staunton Coal Co.....	Good	Brk troughs far apt
116	Kanawha...	Anne.....	Thomas-Scholtz C. Co.....	Fair..	Insuff'ct brk trougs
117	Kanawha...	Lewiston No. 2.....	The Kellys Creek Coal Co.....	Good	.....
118	Kanawha...	United.....	United C. Co.....	.....	.....
119	Kanawha...	Virginia.....	Virginia Mining Co.....	Good	.....
120	Kanawha...	Riverside.....	The Riverside Coal Co.....	Fair..	Ventilation.
121	Kanawha...	Belmont.....	Belmont Coal Co.....	Fair..	Ventil'n & drainage.
122	Kanawha...	Back Hill.....	Belmont C. Co.....	Good	.....
123	Kanawha...	Front Hill.....	Belmont C. Co.....	Bad..	Ventilation.
124	Kanawha...	Crown Hill.....	Polsne C. Co.....	Good	.....
125	Kanawha...	Chesapeake.....	Chesapeake Mining Co.....	Good	Brk troughs far apt
126	Kanawha...	Handley No. 2.....	Chesapeake Mining Co.....	Good	.....
127	Kanawha...	Union No. 1.....	Montgomery C. Co.....	Fair..	Drainage.
128	Kanawha...	Union No. 2.....	Montgomery C. Co.....	Fair..	Drainage.
129	Kanawha...	Consolidated.....	Montgomery C. Co.....	Good	.....
130	Kanawha...	No. 2 Gas.....	Cannelton Coal Co.....	Good	.....
131	Kanawha...	Cannelton.....	Cannelton Coal Co.....	.....	.....
132	Mason.....	New Haven.....	Consumers C. & M. Co.....	Bad..	Ventil'n & drainage.
133	Mason.....	Hartford.....	Hartford City Salt Co.....	Fair..	Drainage.
134	Mason.....	Jenbling.....	Liverpool Salt & C. Co.....	Flo'd	.....
135	Mason.....	Hope.....	Hope Salt & C. Co.....	Fair..	Drainage.
136	Mason.....	Beach Grove.....	Beach Grove C. Co.....	Good	.....
137	Mason.....	McDaniel.....	Mason City M. Co.....	Good	.....
138	Mason.....	Clifton.....	Lewis Brothers.....	.....	.....
139	Mason.....	Camden.....	Camden Clay Co.....	Fair..	Ventilation.
140	Putnam.....	Plymouth.....	Carver Coal Co.....	Good	.....
142	Putnam.....	Florence.....	Marmet-Smith C. & M. Co.....	Fair..	Ventilation.
143	Putnam.....	Pocatalico.....	Marmet-Smith C. & M. Co.....	Good	.....
144	Putnam.....	Queen City.....	Marmet-Smith C. & M. Co.....	.....	.....

*Directory of Mines, Names of Coal Beds, Kind of Ventilation
and Total Number of all Kinds of Inside Employes for
the Year Ending June 30, 1898.*

Name of Superintend.	Name of Mine Boss.	Post Office.	Coal Bed Worked Name.	Thickness Ft in	Kind of Ventilation	Total Inside Employes	No.
T. J. Mason.....	W. H. Green.....	Graham M's	6 Feet.....	3-6	Nat.....	23	73
J. W. Homer.....	.....	Clendenin..	.....	3-6	.....	1	74
L. W. Couch.....	N. C. Poston.....	Jordan.....	F. R. Cann'l	2-2	Fan.....	44	76
J. B. Carson.....	J. B. Carson.....	Charleston..	.....	3-8	Furn.....	5	77
W. G. Watson.....	J. P. Watson.....	Graham M's	.....	3-7	Nat.....	9	78
J. B. Carson.....	J. B. Carson.....	Charleston..	.....	.....	.....	.....	79
W. G. Watson.....	W. G. Watson.....	Graham M's	.....	.....	.....	.....	80
Wm. Dickinson.....	Jake Kelly.....	Malden.....	Lewiston.....	3-4	Furn.....	13	81
J. E. Dana.....	W. B. Calderwood..	.....	Camp. Cr.....	4-6	Fan.....	145	82
J. E. Dana.....	W. B. Calderwood..	.....	Camp. Cr.....	4-8	Furn.....	118	83
J. J. Lovell.....	John Sullivan.....	Hernshaw..	Up Camp. Cr	3-8	Furn.....	30	85
Robt. Brabbin.....	L. N. Perry.....	.....	Cedar Grove	3-2	Nat.....	2	87
M. O. Brooks.....	J. W. Noble.....	.....	Lens Creek..	3-6	2 Furn.....	39	88
A. M. Woolridge.....	L. W. Pryor.....	.....	Black Band	3-6	Furn.....	47	90
A. M. Woolridge.....	L. W. Pryor.....	.....	Black Band	3-6	Furn.....	18	91
R. B. Cassady.....	James Youell.....	Winfrede....	Winfrede....	5-7	Fan.....	155	92
R. B. Cassady.....	James Youell.....	.....	Winfrede....	5-7	Fan.....	170	93
R. B. Cassady.....	James Youell.....	.....	.....	2-6	.....	.....	94
Libert Chandler.....	W. N. Dixon.....	Lewiston.....	Lewiston.....	3-8	Furn.....	48	98
Arthur Robinson.....	R. G. Poff.....	Coalburg.....	Coalburg.....	4-7	Furn.....	132	100
Arthur Robinson.....	James MacClarey..	.....	.....	.....	.....	.....	101
John W. Moore.....	A. P. Crawford.....	Rouda.....	Coalburg.....	7-7	Furn.....	77	102
R. G. Vance, Jr.....	.....	Acme.....	.....	.....	.....	.....	103
R. G. Vance, Jr.....	J. S. Holmes.....	.....	Mid. Kittan	4-10	Furn.....	85	104
R. G. Vance, Jr.....	W. H. Morris.....	.....	L. Freeport	4-6	Fan.....	70	105
J. J. Neylan.....	.....	Shrewsbury	Coalburg.....	6-7	Nat.....	52	106
Jas. Kelso.....	Thos. McAllister..	East Bank..	Cedar Grove	3-7	Furn.....	43	107
F. E. Lair.....	D. B. Howing.....	.....	Lewiston.....	3-7	Furn.....	90	108
J. D. Harris.....	Chas. P. Parell.....	Monarch.....	L. Freeport	3-7	Furn.....	76	109
Henry Davis.....	James Morgan.....	Cedar Grove	Coalburg.....	4-7	Furn.....	.....	110
Henry Davis.....	James Morgan.....	.....	Cedar Grove	2-6	Fan.....	101	111
D. H. Putney.....	W. H. Meise.....	Mammoth..	Cedar Grove	3-6	Furn.....	28	114
D. H. Putney.....	M. Beam.....	.....	Coalburg.....	5-7	Furn.....	68	115
C. Scholtz.....	D. W. Stone.....	.....	Coalburg.....	5-10	Furn.....	57	116
A. C. Finley.....	.....	.....	Lewiston.....	3-7	Nat.....	59	117
J. M. Davis.....	.....	.....	Coalburg.....	4-6	.....	.....	118
H. Davis, H. W. Leitch	Jas. A. Jones.....	Cedar Grove	Cedar Grove	2-6	Fan.....	53	119
C. Scholtz.....	Jos. Miller.....	Riverside....	Cedar Grove	3-8	Fan.....	95	120
T. E. Embleton.....	P. H. Embleton.....	Crown Hill..	Coalburg.....	4-8	Furn.....	110	121
T. E. Embleton.....	P. H. Embleton.....	.....	.....	.....	.....	.....	122
T. E. Embleton.....	P. H. Embleton.....	.....	.....	.....	.....	.....	123
Edwin Polsue.....	John Nugen.....	.....	Kanawha....	3-9	Furn.....	34	124
J. B. Lewis.....	Alex Thompson.....	Handley.....	Kanawha....	6-0	Fan.....	165	125
J. B. Lewis.....	Alex Thompson.....	.....	.....	.....	.....	.....	126
S. H. Montgomery.....	Wm. Tamplin.....	Montg'm'ry	.....	.....	Nat.....	.....	127
S. H. Montgomery.....	Wm. Tamplin.....	.....	Kanawha....	4-7	Nat.....	48	128
S. H. Montgomery.....	Wm. Tamplin.....	.....	Kanawha....	4-7	Fan.....	47	129
Langdon Lee.....	Henry Evans.....	Cannelton....	No. 2 Gas....	6-6	Furn.....	90	130
Langdon Lee.....	Robert Taylor.....	.....	Cannel.....	3-7	Nat.....	88	131
H. L. Roush.....	Wm. Goodnite.....	Spilman.....	Pittsburg....	4-6	Fan.....	129	132
D. E. Mewton.....	Richard Jenkins.....	Hartford C..	.....	4-8	Fan.....	25	133
E. Smith.....	Samuel Edwards.....	.....	.....	4-6	Nat.....	28	134
D. C. Davis.....	Henry Williams.....	Mason City..	.....	4-8	Furn.....	22	135
J. Icenhower.....	J. Vanmeater.....	Mason.....	.....	4-4	Shaft.....	7	136
G. H. Gress.....	W. S. Harris.....	.....	.....	4-1	Nat.....	26	137
Henry Lewis.....	.....	Clifton.....	.....	4-7	Furn.....	8	138
M. G. Tyler.....	J. Armstrong.....	Spilman.....	.....	4-7	Nat.....	10	139
W. A. Carver.....	James Carver.....	Plymouth....	.....	6-7	Fan.....	78	140
Ed. Schonebaum.....	Lewis Trevillion..	Raymond C..	.....	5-6	Furn.....	250	142
Ed. Schonebaum.....	Lewis Trevillion..	.....	.....	6-7	Furn.....	.....	143
Ed. Schonebaum.....	Lewis Trevillion..	.....	.....	6-7	Furn.....	.....	144

*Condition in Which the Mines Were Found Upon Inspections
Made for the Year Ending June 30, 1898.*

THIRD DISTRICT, EDWARD PINKNEY, INSPECTOR.

No.	COUNTY.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient In.
145	Fayette.....	Eureka	M. T. Davis & Co.....	Good	.....
146	No. 5 Block.....	M. T. Davis & Co.....	Good	.....
148	Mecca.....	Carver Brothers.....	Fair..	Ventilation.
150	Strangman	Coal Valley M. Co.....	Fair..	.....
152	Crescent.....	W. R. Johnson.....	Good	.....
152a	No. 5 Block.....	W. R. Johnson.....	Fair..	Drainage.
153	" 1 Edgewater.....	Carver Brothers.....	Good	.....
154	" 2 Edgewater.....	Carver Brothers.....	Good	.....
155	" 5 Block.....	Carver Brothers.....	Fair..	Drainage.
156	Eagle.....	Carver Brothers.....	.....	.....
157	St. Clair No. 1.....	The St. Clair Co.....	Good	.....
158	St. Clair No. 2.....	The St. Clair Co.....	Good	.....
159	Forest Hill.....	Forest H. C. & C. Co., T. P. Davies, R.....	Good	.....
160	Diamond.....	J. F. Budette.....	Good	.....
161	Harewood.....	W. R. Johnson & Co.....	Good	.....
162	Boomer.....	Boomer C. & C. Co.....	Good	.....
163	Vulcan.....	The Mt. Carbon Co., Ltd.....	Good	.....
165	Great Kanawha.....	The Gt. Kan. Colliery Co., Ltd.....	Good	Drainage.
166	Digby.....	The Gt. Kan. Colliery Co., Ltd.....	Good	Drainage.
167	McDougal.....	L. R. Morgan.....	Good	.....
168	Gauley Mountain.....	The Gauley Mountain C. Co.....	Good	.....
169	Gaymont.....	Leitz-Masterson C. & C. Co.....	Good	.....
170	Sunnyside.....	Thomas Coke Co.....	Good	.....
171	Elmo.....	New River Mining Co.....	Fair..	Ventilation & drain.
172	Fayette.....	Fayette C. & C. Co.....	Good	.....
173	Nuttallburg.....	Nuttallburg C. & C. Co.....	Fair..	Ventilation & drain.
174	Keeney's Creek.....	".....	Good	.....
175	No. 3.....	".....	Good	No map recent date.
177	Brown.....	Brown Coal Co.....	Good	.....
178	Boone.....	Boone C. & C. Co.....	Good	.....
179	Ballinger No. 1.....	Ballinger Coal Co.....	Fair..	Drainage.
180	Ballinger No. 2.....	".....	Good	.....
181	Smokeless.....	Smokeless C. Co.....	Good	.....
182	Dubree.....	Rothwell C. Co.....	Good	.....
183	Blume.....	Blum C. & C. Co.....	Good	.....
184	Caperton.....	Wm. Beury, Coope & Co.....	Good	.....
185	North Side.....	New River Coke Co.....	Good	.....
186	South Side.....	".....	Good	.....
187	Harvey.....	Harvey C. & C. Co.....	Good	.....
188	Cunard.....	Cunard C. Co.....	Good	.....
189	Brooklyn.....	Brooklyn C. Co.....	Good	.....
190	Firk Creek.....	Fire Creek C. & C. Co.....	Good	.....
191	Central.....	Central Coal Co.....	Good	.....
192	Echo No. 1 & 2.....	Echo C. & C. Co.....	Good	.....
193	Red Ash.....	Red Ash Coal Co.....	Good	.....
194	Rush Run.....	Rush Run C. & C. Co.....	Good	.....
195	Dimmock.....	Dimmock C. & C. Co.....	Good	.....
196	Thurmond.....	The Thurmond C. Co.....	Good	Vent'n bad No 3 mine
197	-tone Cliff.....	Beury C. & C. Co.....	Good	.....
198	Be'chwd & Keyste.....	Beechwood C. & C. Co.....	Fair..	Ventilation.
199	Alaska.....	Alaska C. & C. Co.....	Good	.....
200	Slater.....	Slater Coal Co.....	Fair..	Ventilation & drain.
201	Cliff Top.....	Longdale Iron Co.....	Good	.....
202	Star.....	The Star C. & C. Co.....	Good	.....
203	Collins.....	Collins Colliery Co.....	Good	.....
205	Sub.....	Sun C. & C. Co.....	Good	.....
206	Dunloop.....	Dun Loop C. & C. Co.....	Bad..	Ventilation & drain.
207	Turkey Knob.....	Turkey Knob C. Co.....	Good	.....
208	Macdonald.....	The Macdonald Colliery Co.....	Good	.....
209	Mt. Hope.....	Sugar Creek C. & C. Co.....	Good	.....
210	Quinnimont.....	Quinnimont Coal Co.....	Fair..	Drainage.
211	Robins.....	The Robins Coal Co.....	Fair..	Inattention furnace.
212	Laurel Creek.....	Laurel Creek Coal Co.....	Bad..	Ventilation & drain.
213	Big Q.....	Quinnimont Coal Co.....	Good	.....
214	Greenwood.....	Greenwood Coal Co.....	Good	.....
216	Raleigh.....	Royal.....	Royal C. & C. Co.....	Good	.....

Directory of Mines, Names of Coal Beds, Kind of Ventilation, and Total Number of All Kinds of Inside Employees, for the Year Ending June 30, 1898.

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked. Name.	Thickness, Ft., In.	Kind of Ventilation.	Total Inside Employees.	No.
M. T. Davis.....	Geo. Frasier.....	Montgomery	Gas.....	5-6	Fan.....	40	145
M. T. Davis.....	Geo. Frasier.....	"	No. 5 Block.....	6-6	Furn.....	60	146
John Carver.....	John H. Tassart.....	"	Coal Val.....	"	Fan.....	92	148
J. W. Straughan.....	Walter Covertson.....	"	".....	4-6	Furn.....	40	150
Thos. A. Bartlam.....	James Giles.....	Crescent.....	".....	5-8	Fan.....	174	152
Thos. A. Bartlam.....	Richard Howe.....	"	No. 5 Block.....	6-8	Nat.....	89	152a
Enoch Carver.....	J. H. Jackson.....	Eagle.....	Eagle No. 1.....	1-1	Furn.....	53	153
Enoch Carver.....	John E. Carver.....	"	Gas No. 2.....	5-5	Fan.....	62	154
Enoch Carver.....	John E. Carver.....	"	No. 5 Block.....	6-6	Furn.....	62	155
Enoch Carver.....	J. H. Jackson.....	"	Eagle No. 1.....	1-1	Fan.....	51	156
M. T. Davis.....	A. P. Shear.....	"	Eagle.....	4-6	Fan.....	40	157
M. T. Davis.....	Andrew Shear.....	"	Gas No. 2.....	5-5	Fan.....	55	158
T. P. Davies.....	Mat Dixon.....	"	".....	4-6	Furn.....	58	159
J. F. Burdette.....	D. C. Turner.....	Mt. Carbon.....	".....	5-6	Fan.....	95	160
W. T. Leavell.....	R. M. Odell.....	Harewood.....	Block.....	4-8	Furn.....	19	161
J. J. Duffy.....	W. H. Vaughan.....	"	Gas.....	5-8	Furn.....	71	162
D. T. Evans.....	J. I. Absalom.....	Powellton.....	Powellton.....	5-6	N. F. Fan.....	138	163
William Brown.....	John Holmes.....	Mt. Carbon.....	Gas.....	5-6	Nat. Fan.....	114	165
William Brown.....	John Holmes.....	"	Gas.....	5-6	Nat.....	58	166
L. R. Morgan.....	".....	Hawks Nest.....	New Piver.....	2-6	Nat.....	12	167
Wm. N. Page.....	J. W. S. Raughan.....	Austed.....	Lo. Kittan.....	6-11	Fur. Fan.....	396	168
F. A. Dej z.....	J. C. Grissinger.....	Hawks Nest.....	Red Ash.....	3-3	Furn.....	68	169
D. R. Bishop.....	A. D. Pike.....	Sunnyside.....	Lo. Kittan.....	3-4	Fur. Nat.....	57	170
J. H. Boyd.....	J. A. Crawford.....	Elmo.....	Sewell.....	3-3	Furn.....	35	171
J. A. Boone.....	Val Backman.....	Fayette.....	".....	3-3	Furn.....	98	172
Fred K. Raven.....	James W. Sims.....	Nuttallburg.....	".....	3-6	3 Furn.....	95	173
Fred R. Raven.....	John W. Small.....	"	".....	3-6	Nat.....	60	174
Fred K. Raven.....	John W. Small.....	"	".....	"	"	"	175
Percy H. Brown.....	W. D. Light.....	"	Sewell.....	1-1	Furn.....	91	177
W. F. Boone.....	Mike Zwilling.....	Bone.....	".....	1-1	Furn.....	71	178
George Holland.....	Richard Seymour.....	Nuttallburg.....	".....	1-1	Nat. Fur.....	89	179
George Holland.....	A. Onlinger.....	"	".....	4-4	Nat.....	54	180
J. D. Campbell.....	Wm. K. Hall.....	Winona.....	".....	4-4	Furn.....	56	181
H. H. Rothwell.....	Charles Higgins.....	Nuttallburg.....	".....	3-6	Furn.....	75	182
D. W. Boone.....	Thomas Steed.....	Lookout.....	".....	3-4	Furn.....	65	183
J. L. Beury.....	Wm. Dower.....	Caperton.....	".....	1-1	Fan.....	5	184
Charles Catlett.....	Thomas Boyd.....	"	".....	1-1	Nat.....	59	185
Charles Catlett.....	J. C. Gibson.....	"	".....	1-1	Furn.....	127	186
J. G. McGuffin.....	A. P. Gibson.....	Bissell.....	".....	5-6	Fan.....	227	187
F. Howald.....	David Evandall.....	Rush Run.....	".....	4-1	Furn.....	49	188
F. Howald.....	John Laing.....	"	".....	1-1	Furn.....	52	189
G. H. Caperton.....	Robert Boyd.....	Fire Creek.....	".....	3-4	Nat.....	115	190
J. R. Seal.....	P. J. Riley.....	Fire Creek.....	Fire Creek.....	3-4	Fan. Nat.....	100	191
Thos. C. Beury.....	Geo. McDaniel.....	Beury.....	Sewell.....	4-4	Fan.....	122	192
F. Howald.....	John Laing.....	Rush Run.....	Fire Creek.....	5-5	Furn.....	110	193
F. Howald.....	J. N. Schwitzer.....	Rush Run.....	".....	5-5	Fan.....	110	194
W. H. Thayer.....	G. L. Moran.....	Thurmond.....	".....	4-6	Furn.....	90	195
G. H. Caperton.....	Arthur Boyd.....	Concho.....	Sewell.....	1-1	Nat. Fan.....	127	196
O. C. Kubach.....	W. G. McDaniel.....	Stone Cliff.....	".....	4-6	Nat. Fur.....	142	197
C. C. Buery.....	R. B. Hanna.....	Claremont.....	Quinnimont.....	4-4	Nat. Fur.....	195	198
Geo. Lawton.....	H. C. Peters.....	"	Fire Creek.....	4-4	Nat.....	110	199
Mike Straus.....	Mike Straus.....	Coit.....	Quinnimont.....	3-2	Nat.....	45	200
J. A. McGuffin.....	T. G. Burke.....	Sewell.....	Sewell.....	3-3	Nat. Fan.....	172	201
Geo. W. Jones.....	David Stoddard.....	Red Star.....	".....	5-5	Fan.....	107	202
Justus Collins.....	Thomas Lewis.....	Glen Jean.....	".....	1-1	Fan.....	300	203
James Laing.....	J. M. Laing.....	Sun.....	".....	5-6	Fan.....	115	205
F. E. Walker.....	E. T. Hudson.....	Dun Loop.....	".....	5-6	Nat.....	130	206
A. P. Shear.....	A. P. Shearer.....	Macdonald.....	".....	5-6	Nat.....	118	207
Samuel Dixon.....	T. A. Miller.....	"	".....	5-5	Nat.....	220	208
Samuel Dixon.....	Wayman Hunt.....	"	".....	5-6	Furn.....	100	209
D. C. Boyce.....	John McIntosh.....	Quinnimont.....	Quinnimont.....	3-9	Nat.....	66	210
C. H. Robins.....	Wm. Hunter.....	"	".....	3-6	Furn.....	125	211
W. A. Brown.....	J. A. Brown.....	"	".....	1-1	Nat.....	68	212
D. C. Boyce.....	John McIntosh.....	"	".....	1-4	Nat.....	143	213
W. A. Brown.....	W. Crickner.....	Fire Creek.....	".....	4-4	Nat.....	190	214
James Kay.....	David Laing.....	Prince.....	".....	3-6	Furn.....	129	216

*Condition in Which the Mines were Found Upon Inspections
Made for the Year Ending June 30, 1898.*

FOURTH DISTRICT, WILLIAM J. PREECE, INSPECTOR.

No.					
	COUNTY.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in
217	Mingo.....	Camp Branch.....	Camp Branch C. & C. Co.....	Good	.....
218		Pearl.....	Pearl Coal Co.....	"	.....
219		Little.....	James Little C. & C. Co.....	"	.....
220		Freeport.....	Freeport C. & Mining Co.....	"	.....
221		Logan.....	Logan Consolidated C. Co.....	"	.....
222		Maritime.....	The Maritime Coal Co.....	"	.....
223		Thacker.....	Thacker C. & C. Co.....	"	.....
224		Mingo.....	Mingo C. & C. Co.....	Fair..	No second opening.....
225		Lynn.....	Lynn C. & C. Co.....	Fair..	Ventilation.....
226		Grapevine.....	Grapevine Coal Co.....	Good	.....
227	McDowell.....	Neil & Finn.....	Neil & Finn.....	Fair..	.....
228		The Tidewater.....	The Tidewater C. & C. Co.....	Good	.....
229		Bottom Creek.....	Bottom Creek C. & C. Co.....	"	.....
230		Peerless.....	Peerless C. & C. Co.....	"	.....
231		Empire.....	Empire C. & C. Co.....	"	.....
232		Shawnee.....	Shawnee C. & C. Co.....	"	.....
233		Eureka.....	Eureka Coal Co.....	"	.....
234		Pulaski.....	Pulaski Iron Co.....	"	.....
235		Keystone.....	Keystone C. & C. Co.....	"	.....
236		Algoma No. 1 & 2.....	Algoma C. & C. Co.....	"	.....
237		Gilliam.....	Gilliam C. & C. Co.....	"	.....
238		Rolfe.....	Rolfe C. & C. Co.....	"	.....
239		The Roanoke.....	The Roanoke C. & C. Co.....	Bad..	Ventilation.....
240		Indian Ridge.....	Indian Ridge C. & C. Co.....	Good	.....
241		Arlington.....	Arlington C. & C. Co.....	"	.....
242		Greenbrier.....	Greenbrier C. & C. Co.....	"	.....
243		McDowell.....	McDowell C. & C. Co.....	"	.....
244		Ashland.....	Ashland C. & C. Co.....	"	.....
245		Elk Ridge.....	Elk Ridge C. & C. Co.....	"	.....
246		Lynchburg.....	Lynchburg C. & C. Co.....	"	.....
247	Mercer.....	Powhatan.....	Powhatan C. & C. Co.....	"	.....
248		Upland No. 1 & 2.....	Upland C. & C. Co.....	"	.....
249		Houston.....	Houston C. & C. Co.....	"	.....
250		Crozer No. 1 & 2.....	Crozer C. & C. Co.....	"	.....
251		Turkey Gap.....	Turkey Gap C. & C. Co.....	"	.....
252		Lick Branch.....	Norfolk C. & C. Co.....	"	.....
253		Shamokin.....	Shamokin C. & C. Co.....	"	.....
254		Elkhorn.....	Elkhorn C. & C. Co.....	"	.....
255		Norfolk.....	Norfolk C. & C. Co.....	"	.....
256		Angle.....	Norfolk C. & C. Co.....	"	.....
257		Coaldale.....	Mill Creek C. & C. Co.....	Fair..	Ventilation.....
258		Mill Creek.....	Mill Creek C. & C. Co.....	Good	.....
259		Klondike.....	The Klondike Coal Co.....	"	.....
260		Buckeye.....	Buckeye C. & C. Co.....	"	.....
261		Caswell.....	Caswell Creek C. & C. Co.....	"	.....
262	Goodwin.....	Alliance.....	Booth-Bowen C. & C. Co.....	"	.....
263		Louisville.....	Louisville C. & C. Co.....	"	.....
264		The Goodwill.....	The Goodwill C. & C. Co.....	"	.....
265	Pocahontas.....	South-West Virginia Imp. Co.	South-West Virginia Imp. Co.	Fair..	Drainage.....

*Directory of Mines, Names of Coal Beds, Kind of Ventilation
and Total Number of all Kinds of Inside Employees
for the Year Ending June 30, 1898.*

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked. Name.	Thickness—ft. in.	Kind of Ventilation.	Total Inside Employees.	No.
Edward Showers.....	Edward Thomas.....	Dingess.....	Kittan.....	4-2	Furn.....	104	217
C. P. McCafferty.....	Wm. Looney.....	Dingess.....	Lo. Kittan.....	4-1	".....	40	218
James Little.....	".....	Dingess.....	Logan.....	3-1	Nat.....	8	219
James Dunner.....	Thos. Johnston.....	Dingess.....	Up. Freeport.....	5-6	Furn.....	38	222
D. T. Lambert.....	D. K. Koger.....	Hunter.....	Thacker.....	4-8	Fan.....	73	224
B. H. Miller.....	John Moody.....	Thacker.....	Thacker.....	4-8	Furn.....	98	225
A. Morse.....	M. F. Booth.....	Thacker.....	Thacker.....	5-10	".....	116	226
John E. Williams.....	Louis Spears.....	Hatfield.....	".....	3-6	".....	25	227
Arthur Moore.....	Geo. W. Coffey.....	Sheppard.....	Thacker.....	3-10	".....	44	228
John Woodcock.....	Mike Macken.....	Edgerton.....	Thacker.....	11-1	".....	45	229
James Neil.....	".....	Dingess.....	Up. Freeport.....	4-8	Nat.....	6	230
James Johnston.....	C. L. Booth.....	Tidewater.....	Poca No. 3.....	5-8	Fan.....	85	232
William Spencer.....	J. S. Williamson.....	Vivian.....	".....	5-3	".....	76	233
H. B. Wright.....	Matthew Hall.....	Vivian.....	Poca No. 3.....	6-1	".....	105	234
William D. Ord.....	J. M. Shanklin.....	Landgraft.....	Poca No. 3.....	6-1	".....	55	235
P. P. Flannagan.....	P. Haynes.....	Eckman.....	Poca No. 3.....	6-4	".....	75	236
L. E. Tierney.....	W. T. Hetherman.....	Eckman.....	Poca No. 3.....	7-8	".....	110	237
S. F. Morris.....	Geo. Dawson.....	Eckman.....	Poca No. 3.....	7-1	".....	102	238
J. K. F. Steele.....	John Murry.....	Keystone.....	Poca No. 3.....	6-1	Furn.....	73	239
W. H. Thomas.....	W. J. Fritchard.....	Algoma.....	Poca No. 3.....	6-4	Fans.....	220	240
Jas. Johnston.....	Joseph Cooper.....	Gilliam.....	Poca No. 3.....	6-1	".....	65	242
Jas. E. Jones.....	W. H. Walters.....	Worth.....	Poca No. 3.....	5-6	".....	85	243
A. D. Rice.....	B. F. Tipton.....	Worth.....	Poca No. 3.....	5-3	Furn.....	80	244
C. Botsford.....	J. Hackworth.....	Worth.....	Poca No. 3.....	5-3	".....	50	245
Jas. Johnston.....	Robert Belshaw.....	McDowell.....	Poca No. 3.....	5-6	Fan.....	62	246
Jas. Collins.....	Alex. Flauner.....	McDowell.....	Poca No. 3.....	6-2	".....	65	247
T. N. Cooper.....	Levi Washman.....	McDowell.....	Poca No. 3.....	4-5	".....	67	248
G. Mayer.....	Thos. N. Daugherty.....	Ashland.....	Poca No. 3.....	5-1	".....	75	249
L. E. Tierney.....	C. A. Devenney.....	Kyle.....	Poca No. 3.....	6-6	".....	84	250
L. E. Tierney.....	Thomas Denvan.....	Powhatan.....	Poca No. 3.....	7-6	".....	88	252
L. E. Tierney.....	James Hetherman.....	Powhatan.....	Poca No. 3.....	7-1	".....	110	253
Rolf Gerhardt.....	J. K. Flanner.....	Elkhorn.....	Poca No. 3.....	7-1	".....	109	254
T. E. Houston.....	Benj. Lewis.....	Elkhorn.....	Poca No. 3.....	7-2	".....	116	256
J. J. Tierney.....	Samuel Evans.....	Elkhorn.....	Poca No. 3.....	7-1	".....	208	257
W. H. McQuaid.....	Jas Hopkins.....	Ennis.....	Poca No. 3.....	7-1	".....	160	259
Stuart M. Buck.....	William Moore.....	Maybeury.....	Poca No. 3.....	7-1	".....	54	260
J. A. Cardwell.....	E. M. Stephens.....	Maybeury.....	Poca No. 3.....	7-1	".....	95	261
J. E. Barlow.....	W. E. Kefauver.....	Maybeury.....	Poca No. 3.....	7-6	".....	110	262
Stuart M. Buck.....	J. T. Devenney.....	Maybeury.....	Poca No. 3.....	7-6	".....	82	263
Stuart M. Buck.....	W. F. White.....	Maybeury.....	Poca No. 3.....	7-1	".....	22	264
John Cooper.....	Thos. Williams.....	Coopers.....	Poca No. 3.....	9-1	".....	137	265
John Cooper.....	J. R. Booth.....	Coopers.....	Poca No. 3.....	9-1	".....	114	266
Edward Cooper.....	Wm. Nelson.....	Coopers.....	Poca No. 3.....	10-6	".....	7	267
John D. Hewitt.....	Thomas Gens.....	Bramwell.....	Poca No. 3.....	5-6	Fan.....	108	268
Jenkin Jones.....	Milton Gilmore.....	Freeman.....	Poca No. 3.....	8-1	2 Fans.....	200	269
J. P. Bowen.....	T. E. Thomas.....	Bramwell.....	Poca No. 3.....	6 to 8	Fan.....	182	270
Jairus Collins.....	M. J. Samnder.....	Goodwill.....	Poca No. 3.....	6-1	".....	80	271
Philip Goodwill.....	W. D. Dillon.....	Goodwill.....	Poca No. 3.....	4-8	".....	70	272
William Lang.....	R. D. Baldwin.....	Pocah'ton.....	Poca No. 3.....	7-1	".....	134	273

CHAPTER XVI.

Miners' Hospitals.

The Chief Mine Inspector realizing the great importance of the need of hospital service for the unfortunates injured in the coal mines in the State has endeavored to ascertain the plan under which miners' hospitals might be maintained. To this end inquiry was made into the workings of the Sheltering Arms Hospital at Paint Creek, Kanawha County, W. Va., which resulted in the following communication which I have had permission to make public:

SHELTERING ARMS HOSPITAL,
PAINT CREEK, KANAWHA COUNTY.

HON. J. W. PAUL,

Chief Mine Inspector,

MY DEAR SIR:—

Your very kind note asking me for information in regard to the Sheltering Arms Hospital at Paint Creek,—its purpose and plan,—has been received and I cheerfully comply with your request. The "Sheltering Arms" has not only a pathetic beginning, but a deep-interesting history.

About 1886 the angel of death entered one of our homes in the Southern Section of the State, and claimed a bright and beautiful little girl. This little girl's mite box was found to contain quite a sum of money which she had "laid by in store for the Lord" dedicating it to some kind of Christian work. Her mother added enough to make the sum of one hundred dollars and gave it to the Rt. Rev. Dr. Peterkin with the request that he use it in some charitable and Christian work. The Bishop in going out and coming in among the mines noted the great want of some sort of institution to care for the injured and sick miners who were especially subject to such risk in this work. He set aside the hundred dollars as the nucleus of a hospital, and at once began soliciting funds. The great heart especially of our church people was touched and readily responded. The result was that by the last of January, 1887, "The Sheltering Arms" was incorporated for the care of sick and injured, orphan children and aged persons, and within a year buildings sufficiently large had been erected and paid for to accommodate fifteen or twenty patients. The site of this institution and its surroundings are the most quiet and attrac-

tive in the Kanawha Valley. It is central to the New and Kanawha River coal fields. In 1891 it was necessary to erect an additional building containing wards for colored people, as they comprised about 40 per cent. of the whole number of patients. In 1896 the centre building was changed from a single to a two story building containing reception, operating and private rooms for patients.

The Hospital at present consists of a group of three buildings viz. The center one just described, the east wing, containing male and female white wards, offices, dispensary, etc., and the west wing with wards and rooms for male and female colored patients. The Hospital is located above the railroad at Paint Creek, which is the Post, Express and Telegraph offices. The total value of the plant is about \$10,000. There have been about 800 patients treated at the Hospital since its organization, but the majority of these were within the last three or four years, as it took a long time to establish the merits of the institution. The miners stood aloof from it for a time chiefly for two reasons. First, they were more or less skeptical of an enterprise which afforded so much good for such a small money consideration. They looked upon it as some kind of a poor alms house. Secondly, it was hard to get even small subscriptions from men who were in health and strength. Our miners are not enough disposed to make provision for a rainy day or sickness.

Now the Hospital is treating nearly 200 patients a year or an average of about 15 a day. The patients who have been there and restored to health, whether medical or surgical cases, are able to return to their companions with a good account of the care they receive from the resident physician and trained nurses. They are generally the cause not only of sending other patients but they impress upon their friends the benefit of being regular subscribers to the Hospital fund.

We have said that the average number of patients per day is now about 15. This shows an average of about 20 days per patient or a total of 5575 days. I have reduced the time of treatment to days, because to some it might seem a small thing to have only 200 patients in 365 days, whereas city hospitals after report 5000 and 10,000 patients a year. But many of these in the cities are patients who only come for one day or one treatment. The Sheltering Arms being in the country can-

not have the local opportunities and demands of city institutions. The splendid work of this Hospital will therefore be manifest, when we say that we have patients to the equivalent of about 6000 a year at the rate of one a day.

An important item, which you will want to know, is our dependence for expenses. I have not at hand the exact data for this, but I can approximate very closely.

There are about 1,300 miners who give 10 cents each

per month, or annually.....	\$1,560 00
From an endowment fund.....	1,000 00
From Bishop Peterkin and Episcopal churches.....	700 00
Personal subscription from operators.....	400 00
	<hr/>
	\$3,660 00

There are some other amounts coming in from time to time from sources which cannot be calculated, which add a little more to our income. The outside public has been generous in providing the plant, a lady outside the State made an endowment of \$16,000, and one within the State gave \$1,000, and the Episcopal churches in the State have given annually generous Thanksgiving offerings, which enabled us to meet deficiencies. Many of the operators have been liberal, some giving as much as \$100 per annum, and the miners are beginning to contribute. Every miner who gives 10 cents per month on the pay-rolls of the company is entitled to the benefits of the Hospital free of charge in case first of injury and then of sickness. After three years of laying foundations we have gotten to the point where we feel that we should appeal to the community for whose benefit the work was undertaken to give it that constant and cordial support which we believe it deserves at their hands.

It is a comparatively easy matter to build a Hospital, but to provide for its annual and continual support requires long, patient and painstaking effort.

I must warn you of the difficulties in the way, but the right man or men could duplicate this work in both the Northern and Southern part of the State, perhaps also in the Northern Central coal fields, and the blessings arising therefrom would compensate for the great labor involved.

Very sincerely yours,

ROBERT DOUGLAS ROLLER.

CHAPTER XVII.

Observance of the Law.

Many points of our mining laws are violated through a lack of knowledge on the part of mine officials, miners and other under-ground employes. Should the mining laws of this State require special and general rules to be posted at the mines in the manner suggested in another part of this report under the head of legislation, it would materially decrease the number of accidents and deaths in the mines, and the mines themselves would be in a better condition. Several operators throughout the State recognizing the advantages of enforcing certain rules in and about their mines have drafted a set of rules for the government of their employes in and about the mines. To furnish an idea of the nature of these rules the following sets are hereby produced:

GENERAL RULES

Of Cumberland Coal Company's Douglas Mines, Tucker County, West Virginia.

First. All persons employed in and about the mines are required to comply with the laws of the Commonwealth relating to mines and mining, under any and all circumstances.

Second. No boy under the age of twelve years, and no woman or girl of any age shall be employed or permitted to be in the mine for the purpose of employment therein, nor shall any boy of the age of ten years, or any woman or girl of any age, be in or about the outside structure or working of the same for the purpose of employment.

Third. No persons are allowed to ride up or down the incline, or in or out headings in the mines, excepting the haulers.

Fourth. All miners and other employes are required to report immediately to the mining boss all falls of roof in their room, and shall also notify the mining boss when and where caps, props and rails are needed by them.

Fifth. All are forbidden to enter any part of the mines worked

out or abandoned, for any purpose whatever, without first obtaining permission from the mining boss.

Sixth. Strangers or persons not in the employment of the Company are not permitted to enter the mine without the consent of the Superintendent or mining boss. Persons seeking employment must secure it outside.

Seventh. All mining operations and other work that may be done in the mines shall be under the charge of the mining boss, and all employees in the mine shall be under his control. He shall also have charge of the coal until it is dumped into the larry or cars.

Eighth. Haulers shall get their stock at the stable in the morning and return them there after the run is over in the evening, and water and feed them at noon. They shall deliver in regular turns, or as directed by the mining boss the empty wagons to the mouth of the working places, or to the miners, as the custom may be, and take out the loaded wagons as promptly as possible, and deliver them without any unnecessary delay to the lay-off. The haulers shall also load on the wagons and deliver to the miners in their working places any props or timber they may require, and any material, timber, etc., needed by the mining boss or his assistants, and they shall see that no one is permitted to ride on cars inside the mines except the haulers. They must not whip unnecessarily or abuse their horses or mules, and shall perform any work required by the mining boss, and be under his control.

Ninth. Trappers shall open and close doors used in assisting ventilation, and obey the mining boss who shall have control of them.

Tenth. Tipplemen shall keep account of all wagons of coal mined and loaded by each and every miner, and report same to clerk or time keeper. They must see that all wagons are sent out full and free from slate.

Eleventh. The stable boss shall have charge of the stock and stable, attend to the feeding and care of stock, and shall report to the Supt. and shall keep him advised of any neglect or abuse of stock.

Twelfth. Any employee violating any of these rules will subject himself to dismissal, and in case of accident caused by such violation, to prosecution.

Thirteenth. The above rules in connection with the laws relating to mines and mining will be strictly enforced.

JOHN B. JENKINS, Supt.

Approved,

.....

Mine Inspector First District.

RULES AND REGULATIONS

Of the Elkhorn Coal and Coke Co., McDowell County, W. Va.

First. Miners will not be allowed to carry their kegs of powder in the mines or about the houses. Kegs of powder must be left in the powder house, and will be given out at the following hours: From 7 to 7:30 a. m., and from 1 to 1:30 p. m.

Second. Miners are warned against travelling on the engine roads in or about the mines, and to use extra caution while crossing the same. Use the travelling way when entering or leaving the mine. This company will not be responsible for any accident to a person or persons violating this rule.

Third. All unnecessary yelling, whistling or noises of any kind in or about the mine is forbidden.

Fourth. Drivers and bank men are forbidden to drive their mules faster than a walk from the stable to the mine, or from the mine to the stable, nor carry naked light in or about the stable. Drivers must have their mules at the mine and ready for work at 7 o'clock each morning.

Fifth. Employees are forbidden to ride in the engine on trips while running in or about the mines. The company will not be responsible for accidents to any person or persons disregarding this rule, engineman and brakeman must enforce this rule.

Sixth. Employees are forbidden to ride either up or down the incline on the cars. Persons riding on the cars do so at their own risk.

Seventh. Parents will be held responsible for any damage

done to the houses, or any other property belonging to the company, by their children.

Eighth. Employes must report for work at least (10) minutes before the regular starting time, or they cannot go to work that day. All persons are forbidden to walk or trespass on the coke ovens or track, and no person or persons, except the engineer and helper, will be allowed to ride on the engine or larry. Engineman must enforce this rule.

Employes disregarding any of the above rules will be promptly discharged.

By order

ELKHORN COAL AND COKE COMPANY.

CHAPTER XVIII.

Syllabus of Case Decided by the Supreme Court of Appeals of West Virginia, April 2nd, 1898. 44 W. Va. 599.

1. It is the duty of an operator or agent of a coal mine to employ a competent mine boss under and according to the provisions of Section 11, page 995, Appendix, Code 1891, and having done so he has discharged his duty to his employees, in relation to those duties which the statute prescribes shall be performed by such mine boss, and the operator or agent is not liable for injuries arising from the negligence of the mine boss.

2. A mine boss so employed is such a fellow-servant as in case of an injury to other employees through his negligence the master is not responsible.

STATE OF WEST VIRGINIA.

OFFICE OF THE CHIEF MINE INSPECTOR.

CHARLESTON, W. VA., June 20th, 1898.

To the District Mine Inspectors:

Sirs:—In view of the recent decision of the Supreme Court of Appeals of this State relative to the responsibility of mining companies for accidents occurring in coal mines, it is desired that all future accidents be investigated as thoroughly as possible with a view of ascertaining the person or persons at fault, and responsible for the accident, and what precautions might have prevented the accident.

In all cases of fatal accidents, the reports of which are not

accompanied with the report of a coroner or justice of the peace, or a letter from either said officers, stating why such report was not made, the Inspector of Mines for the district in which the accident occurred shall, upon his first visit to the mine after the occurrence of the accident, proceed to procure testimony relative to the accident, in accordance with the provisions of Section 15 of the Mining Laws of this State.

The form of oath which the Inspectors will find convenient to administer is herewith outlined:

“Do you and each of you solemnly swear that the testimony you shall give and the answers you shall make to the questions asked shall be the truth, and the whole truth and nothing but the truth? So help you God.”

Enclosed find circular letter to the coal operators of this State.

Respectfully,

JAMES W. PAUL,
Chief Mine Inspector.

State of West Virginia,
Office of the
Chief Mine Inspector.

CIRCULAR LETTER NO. 1.

Charleston, W. Va., June 20th, 1898.

To the Coal Mine Operators of West Virginia:

SIRS:—There is a disposition on the part of a great many Superintendents of mines in this State to avoid an important feature of the mining laws with reference to the reporting of accidents.

Section 15 of the mining laws plainly states that the Superintendent of the Colliery, or the mine boss, shall *forthwith*, upon the occurrence of an accident, give notice thereof to the inspector of the district stating the *particulars* of such accident. And, if anyone is killed thereby, to the *coroner* of the county also, or in his absence or inability to act, to any justice of the peace, etc.

In perusing the accident reports received at this office during the past year it was quite noticeable that more space was often occupied in giving the particulars surrounding some trivial accident than was devoted to a fatal accident. In stating the cause

and giving the detailed account of an accident it is not sufficient to dismiss the subject by stating that the unfortunate was injured or killed by a fall of slate; fall of the roof; fall of coal; mine cars; fell down shaft; failed to prop his roof; or by his own carelessness. Such expressions in no way give the *particulars*, and, in case of fatalities, such incomplete descriptions will not in the future be accepted by the Mine Inspectors.

The primary cause of there being a mining law was to avoid, as far as possible, having men's lives impaired or lost in the pursuit of their vocation underground.

With the advancement of the science of mining the percentage of accidents should be largely diminished, but the statistics do not show that such a condition is being accomplished. In a large measure the Inspectors of mines are the source from which should come suggestions which would tend to reduce the number of casualties in the mines, but unless the conditions surrounding accidents are fully and accurately reported the Inspector is not in a position to suggest a remedy to prevent similar occurrences.

It is only by a close study of the conditions surrounding accidents that it is possible to secure a reduction in their number.

When reports of fatal accidents are received and the information is found to be deficient the Inspectors will reserve the right to call for the report of a Coroner or Justice of the Peace, or for the cause why such report was not made.

Superintendents of mines and Mine Bosses are respectfully referred to the accident tables on pages 68 and 69 of the report of the Chief Mine Inspector of this State for the year 1897.

It is to be hoped that an effort will be made on the part of the mine officials to reduce the number of casualties in the mines of this State. This may be accomplished by noting closely the circumstances under which the accidents occur and adopting methods which will prevent their occurrence.

This communication, although sent to all mine operators in the State, is for the guidance of those whose officials are disposed to give the subject of accidents little attention.

Respectfully,

JAMES W. PAUL,

Chief Mine Inspector.

Unconstitutional Laws.

Before a law may be made effectual it must be constitutional and devoid of class legislation. Before laws governing the right of contract shall be effective it is necessary to prescribe the limitations of a contract and state the provisions under which a contract is considered lawful and unlawful. Until such a measure is operative all laws governing or restricting the right of contract will be useless, and unless such legislation is adopted it is not prudent to enact mining laws which will be set aside by the Supreme Court of Appeals. The following extracts of recent decisions are added for the information they contain on two important subjects:

The Pennsylvania Screening Bill Unconstitutional.

President Judge Rice, of the Superior Court, has handed down a decision in the case of the Commonwealth vs. S. S. Brown, of Pittsburg.

President Judge Rice discusses the methods employed for screening coal prior to the act of July 15, 1897, which was found to be an unfair and unsatisfactory method. The act of July 15, 1897, provided a remedy and it was under this act that Mr. Brown was indicted and the jury found that he had employed the prosecutor in the case to dig and mine coal at \$2.47 per hundred bushels of lump coal remaining in the screen after screening. The Superior Court finds that it was the duty of the defendant under his contract to credit the prosecutor with, and account to him for, all the coal that remained in the screen after screening and no more. This he did. But under the statute it was his duty, before screening it, to credit the prosecutor with all the coal sent out by him. This he did not do, hence the prosecution. The Court then says:

“Whether we look only at the language of the act, or construe it in the light of the history of the legislation, as given by the Commonwealth’s counsel, it is sufficiently clear that the intent of the legislature was to break up the existing system and to substitute the weight of the screened coal as the basis upon which the miners compensation was to be computed.”

After referring to a number of statutes and other authorities, President Judge Rice says:

“The right to acquire, possess and protect property includes

the right to make reasonable contracts which shall be under the protection of the law. The word "liberty" as used in these constitutional declarations means more than freedom of locomotion. It includes and comprehends among other things freedom of speech, the right of self-defense against unlawful violence, the right to live and work where he will, to earn his livelihood in any lawful calling, to pursue any lawful trade or occupation, and to freely buy and sell as others may. These rights are held subject to such restraints as may be necessary for the common welfare, and of this the legislature is, primarily, the judge.

"We have been referred to the usury laws as resting on a principle analagous to that invoked in the present case. But is any one prepared to pursue the analogy to its logical conclusion and say that under the police power—broad as it is—the legislature may decree what wages the laborer shall receive, as it may fix the rate of interest? The truth is that when the history of the usury laws is understood it will be seen that there is no analogy between them.

Store Checks are Illegal in Illinois.

A very interesting and far reaching decision was recently handed down by the Indiana Appellate Court in connection with the issuing of checks or cards, as the case may be, by the employers for work done. The decision is one of the most sweeping in its results of any yet promulgated by a court, for under the ruling an employe who had been paid by the check or coupon system, could, if he saw fit, repudiate such payment, sue and receive his money in cash. The occasion upon which the decision was rendered is as follows:

The Appellate Court held, in the case of John Naglebaugh against the Harder and Hafer Mining Company appealed from Sullivan County, that a person who buys brass checks or other evidences of indebtedness, given by a corporation to its employes in payment of their wages, and calling for articles of trade at a "company store" controlled by the owners of the corporation, cannot enforce payment in an action on the checks. Naglebaugh had bought checks of the face value of \$500, which severally stated that they were good for \$100," or for "50," or "25," at "Patton and Baldrige's" store, and had been paid by the mining company to its miners as wages.

The court says that issuing or circulating "any check, card or other paper which is not commercial paper to an employee in payment for any work done" is a finable offense, and that the court will not enforce a contract which was based on a violation of law.

Qualification of Mine Bosses.

The fact that a recent ruling of the Supreme Court of Appeals of this State shows that a mine boss is responsible for casualties arising through any mismanagement or violation of the mining laws in so far as the safety of the miners is jeopardized thereby, it is being urged that the mine bosses of this State be required to undergo an examination before some authorized board of examiners to prove their fitness for the duties of their position.

In contemplating the advisability of requiring mine bosses to hold certificates of competency it must be borne in mind that the conditions are vastly different at the mines in this State from the conditions prevalent in our sister State, Pennsylvania. The greatest source of danger in the mines of Pennsylvania is the presence of explosive gas. In West Virginia the greatest danger is from falls of roof and coal. During the past three years but one miner was killed by the explosion of gas in the mines in this State. So far as the State is directly concerned, it is the safety of the men employed in the mines for which laws are enacted. A close familiarity with the dangers in a mine would very materially reduce the casualties. Would it not be well to require of the miner certain prescribed qualifications and definite knowledge pertaining to the methods of preventing accidents? This would have an elevating influence upon the mining fraternity, and it would rid the profession of a great number of incompetent miners.

The fact cannot be too strongly asserted that a vast number of accidents in the mines in this State is due to a lack of knowledge of the dangers encountered by the miner of little experience.

The advantages which the mine boss and miners have for qualifying themselves for a technical examination must be considered. The only means at hand for a laboring man to educate himself are by means of text books and through correspondence. Both of these methods are necessarily disadvan-

tageous. Previous to requiring mine foremen and miners to show their qualifications before a board of examiners a means should be provided for their education along the line of their duties. This could be done by a short course of coal mining being taught at our State University, both by attendance at the University and by a system of correspondence.

The Scranton, Pa., Correspondence School of Mines has done a great work for the Pennsylvania miners and mine bosses, and its good work extends into many States of the Union. Our State needs a home institution which will give our citizens the same opportunities afforded by other States. Time and leniency should be granted in the event of the passage of a law requiring mine bosses to be examined upon technical points.

CHAPTER XVIII.

Suggestions on Needed Legislation.

Hand-in-hand with the increased production of coal from the mines, the accident record maintains its pace and in like manner increases. While the reports of mine inspectors are universally sought for technical and mineral statistics they are infrequently sought for the information contained upon the subject of accidents in the mines. The statistical tables of a mine inspector's report are but a secondary consideration when viewed from the point of our statutory requirements.

The law outlines the scope of the points upon which the inspector shall touch in his report. A close inspection of many published reports fails to disclose the fact that the department of Mine Inspection established by the several states, was created for the protection of the lives of persons employed in the mines. Too little attention appears to be given this feature in the majority of reports. While it is duly proper that mining matters in general should be given space in such publications, a greater space should be devoted to the cause of accidents and to their prevention.

It is a matter of clerical efficiency to tabulate accidents and their causes, and it is a matter of wisdom, judgment and foresightedness, to devise means whereby the lives of men might be spared while they pursue their daily labors in the underground passages and excavations of a coal mine. First, the causes must be ascertained before remedies can be suggested. To learn the

causes, it requires system and accuracy in reporting, and a correct tabulation and classification.

This done, we are in a position to see where the trouble lies.

From a perusal of the details of casualties at mines it is plain to be seen that it is oftener the little things that prove disastrous.

Mine bosses cannot enforce discipline in the mines so long as they are handicapped by senior officials. To make a mine safe it is absolutely necessary to enforce the strictest rules in regard to the method of mining, timbering, etc. No rule or law is effective without a penalty. Gross carelessness or indifference on the part of a miner, when repeatedly practiced, endangering the lives of others as well as his own, deserves a discharge by his employers or an indictment in some Criminal Court. He fears not the latter for our laws are incomplete in such a case. The former he does not fear for the reason that the mining company is only too glad to retain him, with all his carelessness, for the reason of the revenue obtained by virtue of his having to purchase necessary supplies from the operator's store. This is notably true in some of the counties of this State where labor is scarce.

Not since 1887 has there been any legislation for the promotion of the health, safety and welfare of the men employed within and at the mines in this State and for the protection of the mining properties of coal operators. In his Annual Report to the Governor in January, 1887, Hon. H. J. Tucker, State Mine Inspector, proposed the mine laws which are now enforced, providing for the safety of men employed in the mines. Since that time many new conditions have arisen and the mining laws are now considered by the Inspectors of mines inadequate for the necessary safe-guards and precautions to be exercised in the operation of the mines in this State. As may be seen elsewhere in this report, the inspectors of the different districts have commented upon the need of some changes and amendments to our present laws, and it is the sincere conviction of the writer that our laws should be amended in order to make the probability of accidents less liable to occur, and to further promote the healthfulness and safety of the miners in this State. The laws, as they now stand, are good so far as they go, but they are entirely too general in their character. More specific legislation is needed. The increase of fatal acci-

dents at the mines in this State shows conclusively the necessity of specific laws governing the acts of all persons employed in and about the mines. It is paradoxical that out of so large a number of accidents resulting in death that the causes of these accidents, should in so many cases, be assigned to causes which are at variance with the facts in the case. At each inquest the Inspector of the District in which the fatality occurred should be present and propound questions to the witnesses; but our present laws make it optional with the Inspector to be present at these inquests, and it is also, to a certain degree, optional with a Justice of the Peace, to hold an inquest over the remains of persons killed in and about the mines. In all cases of death an inquest should be held and at such a time and place that the Mine Inspector could be present. During the past year a circular letter was sent to all of the coal operators in this State, calling attention to the importance of insisting upon having inquests held in case of any fatal accidents occurring in or about the mines. As may be seen from the list of fatal accidents occurring during the past year, very few inquests were held, showing that the result of the circular letter has not been effective in bringing about the desired result. So it now appears that the law should be positive in the matter of holding inquests on the remains of persons killed in the mines.

In the 1897 mine report, on page 14, attention was called to the system, or rather lack of system, in making breakthroughs between the headings and rooms in the mines. Little good has been derived by this appeal, and it is now considered imperative that the distance between breakthroughs be stipulated by law in a similar manner to which the distances are specified by the mining laws of Pennsylvania, Ohio and other States.

The health of the men employed in the mines in this State is being much impaired by the unhealthful and obnoxious gases evolved by the burning of mineral oils in the lamps of the underground employees. These oils are usually called "miner's oils," but the fact remains that there are some ingredients present which cause excessive volumes of smoke when burned in the miners' lamps. There is a practice among many drivers, roadmen and miners to burn kerosene mixed with blackstrap, the resulting mixture, when burned, generates a great volume of smoke. This smoke is materially injurious to the human system when inhaled.

The laws of the States of Ohio and Pennsylvania prohibit the use of such qualities of oil being burned in the mines and it appears that such oils as are prohibited in those States find a ready sale in West Virginia. It is earnestly recommended that a law restricting the sale of such oils be enacted and that the Legislature provide a means for arriving at a standard test for all illuminating oils sold to and used by the miners in the mines of this State.

The liability of coal operators for damages in case of death or injury to employees resulting from negligence or any violation of the mining laws on the part of the operators or their agents, should be more definitely specified. On this point, the writer has no specific legislation to suggest, but deems it best to refer to the laws in force in other States concerning this. The Pennsylvania State law says: "That for any injury to person or property occasioned by any violation of this act, or any failure to comply with its provisions by any owner, operator or superintendent of any coal mine or colliery, a right of action shall accrue to the party injured against said owner or operator for any direct damages he may have sustained thereby; and in case of loss of life by reason of such neglect or failure aforesaid, a right of action shall accrue to the widow and lineal heirs of the person whose life shall be lost for like recovery of damages for the injury they shall have sustained." The Ohio State law upon this subject is practically verbatim the same as above.

In order that the provisions of the mine laws might be more thoroughly carried into effect and to bring this department into better repute among other State Mine Inspection Departments, it is most earnestly recommended that an appropriation be allowed this office which will admit of the duties being discharged in a manner more creditable to the State. The Chief Mine Inspector and the District Inspectors have been compelled to draw upon their individual funds in order to comply with their oaths of office in the execution of the mine laws.

To lessen the number of accidents in mines, more specific laws should be enacted to govern the management of men in the mines. A careless man in a mine is the greatest enemy his comrades could possibly have and his dismissal should be required at any price. It is to be earnestly hoped that the legislation, in the nature of rules, herein suggested, will be passed at the forthcoming legislature. These rules in no manner entail hard-

ship upon the miner or unnecessary expense to the operator. They are what is needed for the safety and physical welfare of the miners. Too much laxity in the enforcement of discipline in and at the mines is detrimental to the safety of the men and it is a bill of expense to the operators.

In behalf of the safety and preservation of the lives and health of over twenty thousand of our State's citizens and laborers, and for the protection of the properties of over two hundred mining companies, I appeal to the Honorable body of Legislators of this State to enact such parts of the following proposed bill as in their discretion they consider the same to be for the safety and welfare of the citizens of our mining State and for the promotion of our greatest industry—that of coal mining.

Be it enacted by the Legislature of West Virginia:

That sections four, five, nine, ten, fifteen, eighteen and nineteen, of the Appendix to the Code of 1891, pages 991-998, concerning the ventilation and drainage of coal mines and for the protection of the lives of persons employed therein, be amended and re-enacted, and that sections twenty, twenty-one, twenty-two, twenty-three, twenty-four, twenty-five, twenty-six, twenty-seven, twenty-eight, twenty-nine, thirty, thirty-one and thirty-two be added thereto so as to read as follows:

SEC. 4. Each District Inspector shall examine any mine of his district oftener than required by the next preceding section, if in his opinion the circumstances demand it, or if called upon by ten men engaged in any mine, and he shall see that the provisions of this act are observed and strictly carried out. He shall particularly examine into the condition of the mines as to ventilation, drainage, timbering, methods of mining, sanitation, blasting and general safety, and shall make a record of all such examinations. He shall also with each year ending with the thirtieth day of June, make a written report to the Chief Mine Inspector of his proceedings on such inspection, stating therein the number of mines in his district, the improvements made in and at the mines, the condition in which the mines were found, the extent to which this act is obeyed or violated, the number of accidents or deaths resulting from injuries received in or about the mines, with the cause of each of such accidents and deaths, and such other information in relation to mines and mining as he may deem of

public interest, or required of him by the Chief Mine Inspector. He shall also suggest or recommend such legislation on the subject of mining as he may think necessary. Such report shall be filed with the Chief Mine Inspector on or before the 30th day of September next succeeding the year for which it was made. The Chief Mine Inspector shall annually make a full and complete written report of his proceedings as such Chief Mine Inspector to the Governor of the State for the year ending the thirtieth day of June. Such report shall include the reports from the district mine inspectors, the number of visits and inspections made in the State by the district inspectors, the quantity of coal and coke produced in the State, the number of men employed, number of mines operated, ovens in and out of blast, improvements made, prosecutions, etc., and such other information in relation to the subject of mines, mining, inspection and needed legislation, as he may deem of public interest and beneficial to the mining interests of the State.

Such report shall be filed with the Governor on or before the thirtieth day of December next succeeding the year for which it was made, and such report shall be printed upon the requisition of the Governor and paid for out of the general printing fund.

Mine Maps.

SEC. 5. The operator or agent of any coal or clay mine shall within six months after the passage of this Act, make or cause to be made, an accurate map or plan of such mine, on a scale to be stated thereon, in proportion and graphically, not less than two hundred nor greater than one hundred feet to the inch. Such map or plan shall show the openings or excavations, the shafts, slopes, entries, air-ways, headings, rooms, pillars, doors, overcasts, the direction of air-currents by darts, the names of the mine, company, county, and district in which located, the dates of survey, and the general inclination of the coal strata, the elevation above tidewater, so much of the property lines and of the outcrop of the coal seam of the tract of land on which said mine is located, as may be within one thousand feet of any part of the workings of such mine, and all maps shall exhibit the true and magnetic meridian, and no map shall be presented as a delineation of the above requirements unless it be signed by the engineer or surveyor making the map, and the said engineer

or surveyor shall attach to the map an affidavit to the effect that the map is a correct and complete plan of the mine which it represents.

A true copy of such map or plan, shall, within six months aforesaid, be delivered by such operator, to the inspector of his district, to be preserved among the records of his office and turned over to his successor in office; and the original map, or a true copy thereof, shall be kept by such operator at the office of the mine, and open at all reasonable times for the examination and use of the inspector, and such operator shall twice within every twelve months, and not more than seven months apart while the mine is in operation, cause such mine to be surveyed and the map thereof extended so as to accurately show the progress of the workings, the property lines and outcrop as above provided; and he shall immediately thereafter deliver to the inspector of his district a map or plan and statement of the progress of the workings and extensions aforesaid, so as to enable the inspector to trace the same on the map or plan furnished him as above required.

Before any mine or part of a mine is abandoned, or the pillars drawn therein, it shall be accurately surveyed, and the maps thereof extended as aforesaid, and within one month after any mine is abandoned, the person who was the last operator thereof, shall file with the clerk of the county court of the county in which the mine is located, a correct map, showing all the excavations of such mine, to be preserved as a part of the records of the county.

If any operator fail to comply with any provision of this section, the inspector is hereby authorized to have the survey and maps made or extended, as may be necessary in such case, at the expense of such operator, and the reasonable fees and expenses may be recovered in any court of competent jurisdiction by the person performing the work.

SEC. 9. No operator or agent of any coal mine, worked by shaft or slope, shall place in charge of any engine, used for lowering into, or hoisting out of said mine, persons employed therein, any but competent and sober engineers; and no engineer in charge of such machinery shall allow any person except such as may be deputed for that purpose, by the operator or agent, to interfere with any part of the machinery, and no person under

eighteen years old shall be permitted to have in charge any important machinery, fans, engines, boilers or mine locomotives or motors; and no person shall interfere with or intimidate the engineer in the discharge of his duties; and in no case shall more than ten persons ride on any cage or car at one time, and no person shall ride on a loaded cage or car in any shaft or slope. All slopes or engine-planes, used as traveling-ways by persons in any mine, shall be made of sufficient width to permit persons to pass moving cars with safety, or refuge holes of ample dimensions, and not more than sixty feet apart, shall be made on one side of said slope or engine-plane. Such refuge holes shall be kept free from obstructions, and the roof and sides thereof shall be made secure.

Provisions For Proper Ventilation of Mines.

SEC. 10. The operator or agent of every coal mine, whether worked by slope, shaft or drift, shall provide and hereafter maintain for every such mine, ample means of ventilation, affording not less than one hundred cubic feet of air per minute for each and every person employed in such mine, and as much more as circumstances may require, which shall be circulated around the main headings and working places to an extent that will dilute, render harmless and carry off the obnoxious and dangerous gases generated therein, and as the working places shall advance, break-throughs for air shall be made in the pillars or brattices used, so as to keep such working places well and properly ventilated.

As new breakthroughs are made, the ones previously used for the passage of air shall be closed with a stopping made of brick, stone or wood, but in no case shall cloth or canvas be used for a door or stopping.

In mines generating explosive gas (marsh gas), the stoppings in the break-throughs in the main and cross headings, shall be made of solid, incombustible material, laid in cement or mortar; and all ventilating fans shall be kept in operation continually day and night, unless operations are indefinitely suspended or in case of an accident, except a written permission is given by the mine inspector of the district to stop the same, and the same written permission shall state the particular hours the said fans may not be in operation, but the mine inspector may modify such permission or withdraw the same as he may deem best,

but in all cases the fans shall be started two hours before the time to begin work. And all ventilation furnaces in the mines shall for two hours before the appointed time to begin work, and during working hours, be properly attended by a person employed for that purpose.

The superintendent or agent of any mine shall not interfere with the mine boss or other officials in their fulfillment of any duties required by this Act; and if for any cause the superintendent or agent cannot procure the necessary supplies or materials necessary for complying with the provisions of this Act, he shall notify the mine boss, whose duty it shall be to withdraw the men from the mine or part of the mine until the supplies or materials are received.

SEC. 15. Whenever by reason of any explosion or other accident in any coal mine, or the machinery connected therewith, loss of life or serious personal injury shall occur, it shall be the duty of the superintendent of the colliery, or in his absence the mining boss in charge of the mine, to give notice thereof forthwith, by mail or otherwise, to the inspector of the district, stating the particulars of such accident. And if one is killed thereby, to the coroner of the county also, or in his absence or inability to act, to any justice of the peace; and the said inspector shall, if he deem it necessary from the facts reported, immediately go to the scene of such accident and make such suggestions and render such assistance as he may deem necessary for the future safety of the men; and investigate the cause of such explosion or accident, and make a record thereof, which he shall preserve with the other records of his office; and to enable him to make such investigation, he shall have the power to compel the attendance of witnesses, and to administer oaths or affirmations; and the cost of such investigation shall be paid by the county in which such accident occurred, in the same manner as the costs of coroner's inquests are now paid. In all cases of death resulting from accidents, as aforesaid, the coroner or justice shall impanel a jury, no one of whom shall be directly or indirectly interested. and an inquest held, and the inspector of mines shall be notified by the coroner or justice as to the time and place at which the inquest shall be held, and upon the request of the inspector the said inquest may be postponed from time to time, and the inspector, if present at such inquests, shall have the right to appear and testify and to offer

any testimony that may be relevant, and to question and to cross question any witness; and the coroner or justice shall deliver to the inspector a copy of the testimony and verdict of the jury.

SEC. 18. Each and every mine in the State of West Virginia shall bear some specific name or number, to be so named or numbered by the owners or operators of said mine, and such name or number shall be legibly marked on a board, timber or stone and placed in a conspicuous place near the mouth of the mine; and it shall be the duty of the superintendent or agent of each mine to see that this Act is complied with.

Stretchers and Blankets.

SEC. 19. The owner, operator, agent or superintendent of every mine and colliery, shall provide and keep at such mine or colliery at least one stretcher, for the purpose of carrying to their place of abode, any person or persons who may be injured or killed while in discharge of his or their work at such mine or colliery. The stretcher shall be constructed of such material and in such manner as to afford the greatest ease and comfort in the carriage of the injured person. And the owner, operator, agent or superintendent of every mine or colliery, shall, for each stretcher, provide a woolen and water-proof blanket in good condition for use in carrying away any person who may be injured at the mine: *Provided*, that where more than one hundred and fifty persons are employed two stretchers and accompanying blankets shall be kept.

SEC. 20. The owner, operator or superintendent of a mine or colliery shall, without delay, give notice to the inspector of the district in which said mine or colliery is situated in any or all of the following cases.

1. Where any working is commenced for the purpose of opening a new mine, slope or shaft to which this Act applies.

2. Where a squeeze or crush, or any other cause or change may seem to affect the safety of persons employed in any mine, or where fire occurs or a dangerous body of gas is found in any mine.

3. In the event of the change of name of any mine or the name of the company operating any mine.

4. Where any mine is abandoned or indefinitely suspended.

SEC. 21. There shall be placed at the mouth of all shafts and at each landing, safety gates, to be approved by the mine inspector of the district, for the protection against persons or animals falling into the shaft, and there shall be cut out or around the side of every hoisting shaft, or driven through the solid strata at the bottom thereof, a traveling way not less than five feet high and three feet wide to enable persons to pass the shaft in going from one side of it to the other without passing over or under the cage or other hoisting apparatus. And all machinery about mines from which any accident would be liable to occur shall be properly fenced off by suitable guard railing.

Clay Mines.

SEC. 22. The provisions of this Act shall apply to mines which produce clay, sand, limestone or coal from underground excavations.

Oil.

SEC. 23. No explosive or impure oil or oils shall be used or taken into coal mines for the purpose of illumination. Only a pure animal or pure cotton-seed oil or oils, or such oil that shall be as free from smoke as a pure cotton-seed oil, shall be used for illuminating purposes in any coal mine and it shall be unlawful for dealers to sell to the miners any other oil or oils than such as fulfill the aforesaid requirements.

Powder.

SEC. 24. No powder or high explosive shall be stored in any mine, and no more of either article shall be taken into the mine at any one time than is required in any one shift, unless the quantity be less than five pounds, and all powder shall be carried into the mine in tin or other metallic canisters. Whenever the mine inspector discovers that the air in any mine is becoming vitiated by the unnecessary blasting of coal, he shall have the authority to regulate the use of the same and to designate at what hour of the day blasting may be permitted, and he shall at once stop the working of the mine until proper ventilation is secured.

Sprags.

SEC. 25. When in the opinion of the district mine inspector he believes the leaving of sprags under the coal while being under cut by the miner will add to the safety of the miners in any mine in his district, he shall have the power to cause the miners to leave such safety sprags and it shall be the duty of the mine boss to direct that such instructions are complied with.

Safety Blocks.

SEC. 26. At the head of each incline plane within and without a mine there shall be placed efficient safety blocks, and at points along the incline derailing switches shall be placed to prevent the cars from endangering the lives of persons at the bottom of the incline.

Signals.

SEC. 27. Where a code of signals is used in the operation of any shaft, incline or rope haulage, the code shall be written or printed and copies posted at the engineer's station and at such other places as they are liable to be needed.

SEC. 28. For the purpose of conducting any experiments or analysis with a view of ascertaining the ingredients of any oil, powder or other material affecting the health of the men employed in the mines, the chief mine inspector shall have access to the laboratories of the West Virginia University.

Section 29. General Rules.

Rule 1. The mine boss, or some other competent person or persons to be designated by him, shall examine as often as practicable, but not exceeding four days apart during days on which men are in the mine, all slopes, shafts, mainroads, traveling ways, signal apparatus, ropes, drums, elevators, boilers, engines, pulleys and timbering along important manways, in and about the mine, and shall see that they are in a safe and efficient condition, and a record book shall be kept upon which shall be entered a record of any irregularity in the working of the machinery or of any dangerous condition in or about the mine.

Rule 2. Any miner, workman or employe having immediate

charge of a "working place" in any mine shall as far as practicable keep the roof and sides thereof properly secured by timber or otherwise so as to prevent such roof and sides from falling, and he shall not do any work or permit any work to be done under loose or dangerous material except for the purpose of securing the same.

Rule 3. No person shall ride upon or against any loaded car or cage in any shaft or slope in a mine or colliery.

Rule 4. Any miner or other workman who shall discover anything wrong with the ventilating current or with the condition of the roof, side, timber or road-way, or with any part of the mine in general, such as would lead him to suspect danger to himself or his fellow-workmen or the property of his employer, shall immediately report the same to the mine foreman or other person for the time being in charge of that part of the mine.

Rule 5. Whenever a workman shall open a box containing explosives, or while in any manner handling the same, he shall first place his lamp not less than five feet from said explosive and in such a position that the air current cannot carry sparks to it, and a workman or any other person shall not approach nearer than five feet to any open box containing powder or other explosive, with a lamp, lighted pipe, or any other thing containing fire, and it shall be unlawful for any person while in a mine to strike a metallic powder can containing powder, with a pick or other steel or iron pointed instrument for the purpose of making an aperture or hole in the powder can.

Rule 6. In charging holes for blasting in slate or rock in any mine, no iron or steel pointed needle shall be used, and a tight cartridge shall not be rammed into a hole in slate, rock or coal with an iron or steel bar, unless the end of the tamping bar is tipped with at least six inches of copper or other soft metal.

Rule 7. No person shall be employed to blast coal, slate, or rock in a mine whom the mine boss knows or has reason to believe not to be qualified, by experience or judgment, to perform the work with ordinary safety.

Rule 8. An accumulation of gas in mines shall not be removed by brushing where it is practicable to remove by brattice.

Rule 9. Where steam, air, gas or electrical locomotives are used in any mine, an efficient alarm and light shall be provided

and attached to the front end of every train of cars pushed or drawn by a locomotive in any mine or part of a mine.

Rule 10. Safety holes shall be made at the bottom of all slopes and planes in a mine, and be kept free from obstructions to enable the footmen to escape readily in case of danger, and a suitable and efficient signal shall be provided at or near the foot of all planes, inside and outside of the mine, which may be operated from any point along the entire length of the plane, as a warning in case of danger.

Rule 11. For the purpose of making known the rules and the provisions of this Act to all persons employed in or about such mine or colliery to which this Act applies, an abstract of the rules and Act shall be posted up in legible characters in some conspicuous place at or near the mine or colliery, where they may be conveniently read by the persons employed, and so often as the same becomes obliterated or destroyed, the owner, operator, or superintendent, shall cause them to be renewed with all reasonable dispatch. Any person who pulls down, injures or defaces such abstract of the Act or rules when posted in pursuance to the provision of this Act, shall be guilty of a violation of this Act. Copies of these rules shall be furnished by the State.

Rule 12. Any person who fails to comply with any of the foregoing rules, or any of the provisions of this article, shall be guilty of an offense against this Act.

Section 30. Special Rules.

MINE BOSS.

1. The mine boss shall see that the necessary caps and props are furnished the miners at their working places in the mines. Such props shall be sawed square on one or both ends and cut to a length most suitable to their purpose.

2. He shall cause all stoppings along the air-ways to be properly built.

3. He shall provide a book or sheet to be put in some convenient place or places, upon which shall be made a place for the numbers used by the miners, so that the miners may write the quantity of props, their approximate length, and the number of caps and other timber which they require, together with the date of the order. Said book or sheet shall be preserved thirty days from their date.

Fire Boss.

4. The fire boss shall enter the mine before the men have entered it, and before proceeding to examine the same, he shall see that the air current is traveling in the proper course, and if all seem right, he shall proceed to examine the workings, and in the event of any danger of any nature being found, he shall immediately report the same to the mine boss.

Miners.

5. Each miner shall examine his working place before beginning work and take down all dangerous slate or coal, or otherwise make it safe by properly timbering the same before commencing to dig or load coal, and he shall at all times be very careful to keep his working place in a safe condition during the working hours, and should he at any time find his place becoming dangerous from any unusual condition which may have arisen, he shall at once cease working and inform the mine boss of such danger, and before leaving such place he shall place some warning at the entrance thereto to warn others from entering into the danger.

6. After each blast the miner shall examine with great care the roof and coal and see that they are made safe before beginning work.

Drivers.

7. A driver shall not leave any car or cars standing where they may interfere with or obstruct the ventilating current, except in case of accident to the trip, or for the purpose of collecting or distributing a trip of cars, and no trip shall be left standing in any part of the mine where it is liable to endanger the lives of drivers of a trip following.

8. Whenever a trip rider, driver or other employee shall discover any defect in a rope, link or hitching in use within or without the mine he shall immediately report the matter to the mine boss or superintendent, and the said rope, link or hitching in such use shall not be further used until repaired.

Other Employees.

9. The furnace man must at all times keep a clear, brisk fire,

and the fire must not be smothered with coal or slack during working hours.

10 A cager at a shaft shall see that no driver, or other person, ascends the shaft with any horse or mule, unless the said horse or mule is secured in a suitable box, or safely penned, and no more than two persons shall accompany it.

11. No unauthorized person shall enter the mine without permission from the superintendent or mine boss, and no person known to be in a state of intoxication shall be allowed to go into or loiter about a mine.

12. All persons, except those duly authorized, are forbidden to tamper with any electric or signal wires in or about the mines.

13. No person other than the driver or trip runners shall be permitted to ride upon the loaded cars.

14. No inexperienced person shall be employed to mine out pillars unless in company with one or more experienced miners.

15. Each person when engaged to perform work in mine, shall have his attention directed to the rules by the person employing him.

SEC. 31. Any person, firm, corporation, or agent to which this act applies, who shall wilfully neglect or refuse to perform the duties required by any section of this act, or shall wilfully violate any of the provisions hereof, shall be deemed guilty of a misdemeanor and upon conviction shall be punished as provided in section seventeen, page 998 of the Appendix to the Code of 1891.

SEC. 32. Sections four, five, nine, ten, fifteen and eighteen, of the appendix to the Code of 1891, pages 991-998, and all other acts and parts of acts inconsistent with this act are hereby repealed.

PART II.



SEVENTEENTH ANNUAL REPORT.

TABLE OF CONTENTS.

Letter of transmittal.....	Page 127
Chapter I.	
General summary of the report for 1899.....	“ 128
Chapter II.	
Production of coal and coke for 1899.....	“ 130
Chapter III.	
Machine mining.....	“ 149
Chapter IV.	
Coke and coke ovens.....	“ 153
Chapter V.	
Wages and selling price of coal and coke	“ 157
Chapter VI.	
Mine Locomotives.....	“ 159
Chapter VII.	
Transportation of coal and coke.....	“ 163
Chapter VIII.	
Powder used at the mines.....	“ 166
Chapter IX.	
Improvements made at the mines.....	“ 167
Chapter X.	
Strikes at coal mines.....	“ 168

Chapter XI.

Explosions of Gas and Powder.....	“ 170
-----------------------------------	-------

Chapter XII.

Men employed and days worked.....	“ 171
-----------------------------------	-------

Chapter XIII.

Steam boilers in use at coal mines and acres of coal worked out.....	“ 184
---	-------

Chapter XIV.

Accidents.....	“ 185
----------------	-------

Chapter XV.

Inspections made and Condition of the mines....	“ 210
---	-------



To the Governor:

SIR:—

In this report, Part II, will be found the record of the official conduct of the mine inspectors for the twelve months ending June 30th, 1899, and other data relative to the mining industry in the State. It is a matter of regret that the legislation suggested in the form of a Bill, a copy of which appears in part I of this volume, failed of passage at the last session of our legislature.

This department is apprehensive of the occurrence of some shocking calamity at the gaseous mines in the State as the result of the failure of the enacting into law certain important sections of the Bill proposed.

Following will be found the usual tables showing the production of coal and coke in the various Counties with such other data and comments as are considered relevant to mining in the State.

Respectfully submitted,

JAMES W. PAUL,

Chief Mine Inspector.

CHAPTER I.

GENERAL SUMMARY OF THE REPORT FOR THE YEAR 1899.

With the increasing activity of manufacturing industries West Virginia continues to produce coal and coke in a degree of magnitude only excelled by the States of Pennsylvania and Illinois in coal and Pennsylvania in coke. The rate of increase in the production of coal is such, if maintained, that our State will not be long in being the second coal producing State. By reason of the accessibility of our coal deposits and of their workable thickness they may be mined and the product sold at a price much less than the coal from any other State, and at the same time the miners are compensated for their labor with wages that enable them to enjoy a life of contentment, as the absence of labor trouble well attest.

Not within the history of the State has there ever been greater activity in mining than during the past twelve months, during which time the State produced 16,250,150 tons of coal and 1,950,179 tons of coke, and employed 25,108 men for 240 days in the year at wages 6 to 10 per cent advance over the previous year.

A careful perusal of the tables submitted in this report will convince the most skeptical that an area of commercial activity is actually within the bounds of the State and that our mining industry is awakening to the numerous natural and commercial advantages which are within easy reach.

The details of the coal mining industry of the State are well worthy of careful study and consideration by our Legislative body.

Every encouragement should be offered to induce further development of our great resource, a resource upon which rests the future wealth of the State and the upbuilding of the institutions upon which rests the destiny of future generations.

It is worthy of note that the mines in this State have a greater average production than the mines in the neighboring States.

There is a tendency to consolidate the coal interests in so far that the larger operations are acquiring the mines of the smaller operations. Thus, while the number of mines may increase the number of operating companies do not show the same growth.

The increase production of coal is more the result of the development of mines which have been opened for several years than from the opening of new mines.

In Fayette, Marion, Harrison, Barbour and Preston Counties there are under contemplation the development of new mines which will give an increased tonnage of coal and increase the duties of the mine inspector.

Special attention is hereby directed to the number of gas producing mines in the State treated more fully in chapter—.

During the year 89 men were killed and 193 non-fatally injured at the mines, being one less fatal and 22 more non-fatal respectively than during the previous year.

Considering the fact that the mines were operated 240 days during the year against 214 the year previous and that there was produced 1,955,285 tons of coal in excess of the production during 1898 it is a pleasure to know that the accident list is no greater than stated.

The acres of coal worked out during the year were 2,361.19 being 176.74 greater than the previous year when the acreage was 2,184.45.

The selling price of run-of-mine coal at the mines was 63.2 cts. per ton being 2.7 cts. less than the price received the previous year, and coke sold at the ovens for \$1.25 per ton, an advance of 11 cents over the 1898 price.

Investigation made by this department shows that an exceedingly small percentage of the coal mined in the state is consumed within the State.

An official statement showing the advantages for the conducting of manufacturing industries within the State would probably induce capital to locate within the State such enterprises as would consume our own products and add to the commercial welfare of the State.

Throughout this report wherever coal is given in tons the figures refer to the tons of 2,240 lbs., and coke in tons of 2,000 lbs. unless otherwise specified.

In the general summary, of the tables of this report, which follows, it may be observed that in every important item the figure representing the same show a gain over the previous year, with only four exceptions.

CHAPTER II.

PRODUCTION OF COAL AND COKE, 1899.

The quantity of coal expressed in the tables is given in tons of 2,240 lbs. and coke in tons of 2,000 lbs. The figures stating the production of coal for any given mine includes all the coal taken out of the mine, including such as is used at the mine; sold to local trade; used in the coke ovens and shipped from the colliery.

The production of coal and coke is given for each six months of the fiscal year in order to show the condition of trade and to enable a statement to be made for the calendar year.

Of the 16,250,150 tons of coal produced in the State

78,692 tons were used in operating the mines.

412,855 “ “ sold to local trade and tenants.

2,807,458 “ “ used in the manufacture of coke.

and 12,951,145 “ “ shipped from the mines

Total 16,250,150 tons.

For similar statement of 1898 see page 9 of this volume.

The following Table Exhibits a Comparative Statement and Summary of the annual reports for 1898 and 1899 :

	For Year Ending June 30th, 1899.	For Year Ending June 30th, 1898	Increase of 1899 over 1898.	Decrease of 1899 under 1898.
Number of counties in which coal is mined on a commercial scale.....	21	20	1	
Number of firms operating coal mines on a commercial scale.....	237	241		4
Number of openings of all kinds subject to the mining law.....	267	253	14	
Number of tons (2240 lbs) pick mined coal from commercial mines.....	11,366,871	13,081,572	1,282,299	
Number of tons, (2240 lbs) machine mined coal from commercial mines.....	1,733,279	1,070,203	662,986	
Total number of tons of coal from commercial mines (2240 lbs).....	16,100,150	14,151,865	1,945,285	
Estimated tons of coal from small mines (2240 lbs).....	150,000	140,000	10,000	
Total number of tons of coal from all mines (2240 lbs).....	16,250,150	14,294,865	1,955,285	
Number of tons of coal converted into coke (2000 lbs).....	3,108,067	2,888,550	219,547	
Number of tons of coke manufactured (2000 lbs).....	1,950,179	1,742,256	207,923	
Total value of coal at the mines.....	\$10,268,469.78	\$9,427,463.00	\$841,006.78	
Total value of coke at the ovens.....	\$2,437,723.75	\$1,986,171.84	\$451,551.91	
Value of a ton of coal at the mines (2240 lbs).....	\$6.319	\$6.555		.0276
Value of a ton of coke at the ovens (2000 lbs).....	\$1.25	\$1.14	.11	
Number of mining machines in use.....	140	96	44	
Average number of coke ovens in use.....	6,884	6,166	728	
Number of days the mines were in operation.....	240	214	26	
Number of days the ovens were in operation.....	272	238	34	
Number of pick miners employed in commercial coal mines.....	14,119	11,036	83	
Number of machine operators and miners employed in commercial coal mines.....	1,608	750	858	
Number of under-ground employes in commercial coal mines.....	3,907	3,806	101	
Number of outside employes connected with the commercial coal mines.....	2,461	2,148	313	
Number of coke employes.....	3,013	2,522	491	
Total number of men employed at the commercial mines and ovens.....	25,108	23,262	1,846	
Number of men killed.....	89	90		1
Number of men injured non-fatally.....	193	121	72	
Number of men employed for each man killed.....	282	260	22	
Number of men employed for each man injured.....	130	193		63
Tons of coal mined in commercial mines for each fatality.....	182,586	157,276	25,310	
Tons of coal mined in commercial mines for each non-fatality.....	84,197	116,982	32,785	
Number of wives left widows.....	42	35	7	
Number of children left fatherless.....	106	95	11	
Acres of coal worked out.....	2,361.19	2,184.45	176.74	
Number of tons of coal produced (in commercial mines) per miner pick and machine miners and runners included.....	1,032	937	95	
Average earnings of each miner per year.....	\$276.40	\$322.15	\$54.25	
Average earnings of each miner per month.....	\$31.36	\$36.84	\$4.52	
Average price per ton of 2240 lbs, received for mining (cents).....	36.15	33.94	2.21	

The following tables give the production of Coal and Coke for for the year, by Counties. Production of Coal and Coke in West

Name of County.	Coal (tons of 2240) Production.		
	First six months.	Second six months.	Total for the year.
Barbour.....	39,770	23,505	63,275
Brooke.....	30,072	33,104	63,176
Hancock.....	25,034	14,406	39,440
Harrison.....	209,766	203,384	413,150
Marion.....	1,145,859	1,247,124	2,392,983
Marshall.....	119,211	114,589	233,800
Mineral.....	272,141	282,145	554,286
Monongalia.....	14,425	42,368	56,793
Ohio.....	58,016	61,944	119,960
Preston.....	133,112	141,061	277,173
Randolph.....	12,667	19,368	31,975
Taylor.....	94,100	155,003	249,103
Tucker.....	221,017	266,021	490,038
Kanawha.....	597,796	695,272	1,293,068
Mason.....	57,157	49,710	106,867
Putnam.....	82,341	81,663	164,004
Fayette.....	2,120,924	2,325,545	4,446,469
Raleigh.....	44,756	48,614	93,370
Mingo.....	127,425	222,869	350,294
McDowell.....	1,710,977	1,805,691	3,516,668
Mercer.....	561,061	580,197	1,144,258
Small Mines.....	75,000	75,000	150,000
Totals.....	7,758,568	8,491,583	16,250,150

each six months of the fiscal year and the distribution of the coal Virginia, by counties, for the year ending June 30, 1899.

Coal (tons of 2240 lbs) Distribution.				Coke (tons of 2000 lbs) Production.		
Used in operating mine.	Sold to local trade and tenants.	Used in Coke ovens.	Quantity shipped.	First six months.	Second six months.	Total for the year.
300	500	7,955	54,520	3,720	2,260	5,980
73	10,432		52,671			
	39,440					
885	10,088	9,623	392,554	2,537	3,334	5,871
15,653	19,281	252,081	2,405,068	65,712	90,273	155,985
2,725	37,736		193,339			
237	5,519		548,530			
50	400	8,150	48,193		5,204	5,204
626	24,497		94,837			
1,675	109,165	55,523	110,500	18,290	15,733	34,023
10	692		31,273			
244	1,294		217,565			
3,565	2,318	200,235	283,920	65,832	74,746	140,638
8,385	18,086	14,614	1,251,953	5,128	5,855	10,983
2,209	56,638		48,020			
1,046	3,183		159,775			
23,404	47,453	700,821	3,674,791	208,099	246,900	454,999
500	1,000	32,945	58,925	11,739	8,659	20,398
1,000	3,258		346,036			
12,593	16,188	1,244,926	2,245,964	481,587	441,579	923,166
3,512	5,987	282,645	852,714	97,113	95,819	192,932
			150,000			
78,692	412,855	2,807,458	12,951,145	959,847	990,362	1,950,179

Production of Coal and Coke 1898-99.

BARBOUR COUNTY.		Coal (tons of 2240lbs) Production.		
Name of Company.	Name of Mine.	First six months	Second six months	Total for the year.
Junior Coal Co.	Junior	35,000	17,205	52,205
Philippi Coal Co.	Kelley Mines	4,075	3,925	8,000
South Arden Coal Co.	South Arden	695	2,575	3,270
Totals.....		39,770	23,505	63,275
BROOKE COUNTY.				
Panhandle Coal Co.	Blanche	10,714	16,071	26,785
Gilchrist Coal Co.	Gilchrist	13,483	11,908	25,391
J. W. M. Carmichael	Wellsburg	5,875	5,125	11,000
Totals.....		30,072	33,104	63,176
HANCOCK COUNTY.				
Marquet Coal Co.	Marquet	22,280	13,231	35,511
McElfresh Clay Mfg. Co.	McElfresh	2,754	1,175	3,929
Totals.....		25,034	14,406	39,440
HARRISON COUNTY.				
Bingamon C & C Co.	Bingamon	19,023		19,023
Worthington C. & C. Co.	Worthington No. 2	25,006	27,930	52,936
Globe Coal & Coke Co.	Farnum			
Pinnickinnick Coal Co.	Fall Run No. 2	15,100	25,100	40,200
Pinnickinnick Coal Co.	Jackson No. 1	40,000	35,000	75,000
Briar Hill C. & C. Co.	Briar Hill No. 3		25,967	25,967
Briar Hill C. & C. Co.	Briar Hill No. 1	42,892	39,048	81,940
Glenn Falls C. C. Co.	Glenn Falls	19,103	19,732	38,835
Howard Coal & Coke Co.	Howard	29,266	20,873	50,139
Despard Gas Coal Co.	Despard No. 2	12,150	9,734	21,884
Mt. Clare C. & C. Co.	Mt. Clare	7,142		7,142
Findlay & Co.	Jackson	90		90
Totals.....		204,766	203,384	413,150

1898-99.

BARBOUR COUNTY.						
Coal (tons of 2240 lbs) Distribution.				Coke (tons of 2000 lbs) Production.		
Used in operating mine.	Sold to local trade and tenants.	Used in coke ovens	Quantity shipped.	First six months.	Second six months.	Total for the year.
300	500	7,955	43,250	3,720	2,260	5,980
.....	.....	.....	8,000	.....	.....	.....
.....	.....	.....	3,270	.....	.....	.....
300	500	7,955	54,520	3,720	2,260	5,980
BROOKE COUNTY.						
.....	.....	.....	26,735			
73	10,432	.....	25,391			
.....	.....	.....	495			
73	10,432	.....	52,671			
HANCOCK COUNTY.						
.....	35,511	.....			
.....	3,929	.....			
.....	39,440	.....			
HARRISON COUNTY.						
200	200	.....	18,623			
.....	30	.....	52,900			
200	.....	.....	40,000			
400	1,500	.....	73,100			
.....	105	.....	25,862			
.....	220	9,623	72,067	2,537	3,334	5,871
85	60	.....	38,690			
.....	474	.....	49,665			
.....	347	.....	21,537			
.....	7,142	.....	80			
.....	10	.....	.....	
885	10,088	9,623	392,554	2,537	3,334	5,871

Production of Coal and Coke 1898-99.

MARION COUNTY.		Coal (tons of 2240 lbs) Production.		
Name of Company.	Name of Mine.	First six months.	Second six months.	Total for the year.
West Fairmont C. & C. Co.	New England.	173,471	171,459	344,930
West Fairmont C. & C. Co.	West Ft. Shaft	100,588	116,144	226,732
Gaston Gas Coal Co.	Gaston	106,173	115,711	221,884
Montana Coal & Coke Co.	Montana	111,065	135,792	246,857
Mason Coal & Coke Co.	Mason	20,906	21,315	42,221
Briar Hill Coal & C. Co.	Briar Hill No. 2	46,310	59,052	105,362
Va. & Pittsburg C. & Co.	King	31,836	28,193	60,029
Monongah Coal & Coke Co.	Monongah No. 2.	182,772	183,111	365,883
Monongah Coal & Coke Co.	Monongah No. 3.	113,381	175,382	288,763
Monongah Coal & Coke Co.	Middleton	10,000	15,000	25,000
Clark Coal & Coke Co.	Prichard	28,268	53,806	82,074
J. A. Clark C. & C. Co.	Chiefton	72,398	61,402	133,800
Bryan Coal & C. Co.	Bryan	17,500	20,000	37,500
Worthington C. & C. Co.	Worthington	60,050	61,100	121,150
Highland C. & C. Co.	Highland	1,808	23,324	25,132
Totals		1,145,859	1,217,121	2,362,980
MARSHALL COUNTY.				
Boggs Run Mfg. Co.	Boggs Run	26,180	16,114	42,294
Wheeling Steel & Iron Co.	Benwood	15,083	13,211	28,294
Glendale Coal Co.	Glendale	11,642	11,643	23,285
Moundsville Coal Co.	Moundsville	33,303	40,621	73,924
Totals		119,211	111,589	230,800
MINERAL COUNTY.				
Davis Coal & Coke Co.	Hampshire 6ft	31,413	33,147	64,560
Davis Coal & Coke Co.	" 4ft	29,028	38,328	67,356
Davis Coal & Coke Co.	Windom Gas	28,861	26,975	55,836
Davis Coal & Coke Co.	" Big Vein	12,369	11,561	23,930
W. Va. Central & P. R. R. Co.	Elk Garden	170,170	172,131	342,301
Totals		272,441	282,145	554,586
MONONGALIA COUNTY.				
Opekiska C. & C. Co.	Opekiska	11,236	21,609	32,845
Patterson-Reisinger C. & C. Co.	Beechwood	3,189	17,699	20,888
Totals		14,425	39,308	53,733
OHIO COUNTY.				
T. E. Kasley & Co.	(Manchester) (Whitaker)	6,669	6,670	13,339
Richland Coal Works	Richland	11,562	18,189	30,751
Yochum Coal Co.	Yochum	5,357	5,357	10,714
Elm Grove Coal Co.	Elm Grove Shaft	31,128	31,128	62,256
Totals		58,016	61,944	119,960
PRESTON COUNTY.				
Austin Coke Works	Austin	26,360	26,360	52,720
U. N. Orr C. & C. Co.	West End	9,000	18,000	27,000
Merchants Coal Co.	Tunnelton	72,000	71,000	143,000
F. C. Todd, Esq.	Irona	22,800	22,000	44,800
Oakland C. & C. Co.	Oakland	2,952	5,701	8,653
Totals		133,112	141,061	274,173

1898-99.

MARION COUNTY.				Coke (tons of 2000 lbs) Production.		
Coal (tons of 2240 lbs) Distribution.						
Used in operating mine.	Sold to local trade and tenants.	Used in coke ovens.	Quantity shipped.	First six months.	Second six months.	Total for the year.
1,000	1,195	40,674	302,061	10,239	14,167	24,406
1,000	882	3,339	220,511	264	1,199	1,463
1,263	535	25,831	194,558	3,375	12,382	15,757
810	1,313	44,499	230,175	11,977	16,281	28,258
60	10	19,644	25,507	3,877	7,909	11,786
500	86	3,683	101,023	.....	2,247	2,247
1,600	1,100	16,232	11,037	6,488	6,498	12,986
.....
3,800	11,000	78,079	592,070	22,492	22,493	44,985
.....	.....	.....	25,000	.....	.....	.....
600	300	.....	81,171	.....	.....	.....
1,500	1,300	.....	130,400	.....	.....	.....
200	300	.....	37,000	.....	.....	.....
20	130	21,000	100,000	7,000	7,097	14,097
300	500	.....	24,422	.....	.....	.....
15,653	19,281	252,981	2,105,068	65,712	90,273	155,985
MARSHALL COUNTY.						
128	53	.....	41,813	.....	.....	.....
375	27,922	.....	.....	.....	.....	.....
1,000	.....	.....	88,285	.....	.....	.....
922	9,761	.....	63,241	.....	.....	.....
.....
2,725	37,736	.....	193,339	.....	.....	.....
MINERAL COUNTY.						
.....	300	.....	61,290	.....	.....	.....
.....	100	.....	66,956	.....	.....	.....
.....	100	.....	55,436	.....	.....	.....
.....	.....	.....	23,930	.....	.....	.....
237	4,419	.....	337,948	.....	.....	.....
.....
237	5,519	.....	518,530	.....	.....	.....
MONONGALIA COUNTY.						
.....	100	7,400	28,405	.....	4,464	4,464
50	.....	1,050	19,788	.....	740	740
.....
50	400	8,159	48,133	.....	5,204	5,204
OHIO COUNTY.						
90	13,249	.....	.....	.....	.....	.....
180	534	.....	52,337	.....	.....	.....
.....	10,711	.....	.....	.....	.....	.....
350	.....	.....	62,500	.....	.....	.....
.....
626	24,497	.....	94,837	.....	.....	.....
PRESTON COUNTY.						
1,040	1,100	50,580	.....	15,733	15,733	31,466
.....	.....	.....	27,000	.....	.....	.....
135	108,165	.....	34,700	.....	.....	.....
.....	.....	.....	45,800	.....	.....	.....
500	200	1,953	3,000	2,557	.....	2,557
.....
1,675	103,465	55,533	110,500	28,290	15,733	34,023

Production of Coal 1898-99.

RANDOLPH COUNTY.		Coal (tons of 2240 lbs) Production.		
Name of Company.	Name of Mine.	First six months.	Second six months.	Total for the year.
Randolph Coal	Randolph.....	12,607	19,368	31,975
Totals		12,607	19,368	31,975
TAYLOR COUNTY.				
Grafton C. & C. Co.	Fahey	11,112	24,370	35,482
Grafton C. & C. Co.	Sandlick		3,366	3,366
Flemington C. & C. Co.	Flemington.....	82,038	83,083	165,071
John H. Henry, Esq.	Tyreconnell		25,396	25,396
Davis Coal & Coke Co.	Simpson.....		18,788	18,788
Totals		94,100	155,003	249,103
TUCKER COUNTY.				
Cumberland Coal Co.	Douglas	35,714	64,116	99,830
Davis Coal & Coke Co.	Thomas Shaft	37,678	37,679	75,357
	Thomas Drift			
Davis Coal & Coke Co.	No. 1.....	81,625	81,625	163,250
Davis Coal & Coke Co.	Coketon No. 1....	5,000	5,439	10,439
Davis Coal & Coke Co.	Coketon No. 2....	30,000	32,764	62,764
Davis Coal and Coke Co.	Coketon No. 3....	34,000	44,398	78,398
Totals		224,071	266,021	490,038

1898-99.

RANDOLPH COUNTY.						
Coal (tons of 2240 lbs) Distribution.				Coke (tons of 2000 lbs) Production.		
Used in operating mine.	Sold to local trade and tenants.	Used in coke ovens.	Quantity shipped.	First six months.	Second six months.	Total for the year.
10	692	.....	31,273			
10	692	.....	31,273			
TAYLOR COUNTY.						
.....	189	.....	35,293			
.....	.....	.....	3,366			
244	747	.....	165,080			
.....	233	.....	25,163			
.....	125	.....	18,663			
244	1,291	.....	247,565			
TUCKER COUNTY.						
.....	.....	56,254	43,579	18,000	26,650	44,650
.....	.....	12,731	62,626	4,243	4,214	8,457
3,233	1,178	8,445	150,394	2,815	2,815	5,630
.....	.....	305	10,434	.....	203	203
332	352	54,450	7,630	18,150	18,150	36,300
.....	788	68,053	955	22,684	22,684	45,368
3,565	2,318	200,235	283,920	65,892	74,746	140,638

Production of Coal 1898-99.

KANAWHA COUNTY.		Coal (tons of 2240 lbs.) Production.		
Name of Company.	Name of Mine.	First six months.	Second six months	Total for the year.
John B. Carson, Esq.	Carson	1,000	1,072	2,072
Falling Rock Cannel C. Co.	Falling Rock.....	4,464	5,318	9,812
Elk River Mining Co.	Graham.....	3,225	3,425	6,650
Campbell's Creek Coal Co.	Calderwood	26,795	36,536	63,331
Campbell's Creek C. Co.	Spring Fork	35,724	58,920	94,644
Black Diamond Mining Co.	Black Diamond.....	.....	6,669	6,669
Quincy Coal Co.	Quincy	4,793	6,083	10,876
Peabody Coal Co.	Peabody.....	26,785	26,786	53,571
Victor Coal Co.	Monarch	10,600	10,600	21,200
Va. Mining Co.	Virginia.....	15,945	19,578	35,523
Big Mountain Mining Co.	Big Mountain.....	19,976	23,397	43,373
Kelley's Creek Mining Co.	B No. 4.....	15,436	36,468	51,904
Kelley's Creek Mining Co.	D No. 4 & D No. 2	3,965	1,502	5,467
Kelley's Creek Mining Co.	C No. 2 & C No. 3	17,854	38,593	56,447
Kelley's Creek Mining Co.	"A"	192	.....	192
Riverside Coal Co.	Riverside	26,111	30,315	56,756
Cannelton Coal Co.	Cannelton Can'l	2,290	.....	2,290
Cannelton Coal Co.	Cannelton Gas.....	27,754	49,814	77,568
Charlmore Coal Co.	Charlmore.....	6,750	6,750	13,500
Brabbin Coal Co.	Brabbin.....	2,500	1,250	3,750
Len's Creek Coal Co.	Len's Creek.....	6,500	12,500	19,000
Big Black Band Coal Co.	Atherfon	25,000	12,500	37,500
Winifrede Coal Co.	Winifrede.....	81,521	101,167	185,488
Coalburg Colliery Co.	Ronda	31,526	20,221	51,747
Stevens Coal Co.	Keystone	31,281	36,720	71,001
Stevens Coal Co.	Acme	12,726	13,001	25,727
Robinson Coal Co.	Coalburg	28,650	21,873	50,523
Brannon Coal Co.	East Bank	4,836	8,689	13,525
Kanawha Splint Coal Co.	Black Cat.....	13,392	4,463	17,855
Belmont Coal Co.	Belmont	31,613	17,488	49,131
Polsue Coal Co.	Crown Hill	10,792	9,715	20,507
Chesapeake Mining Co.	Chesapeake.....	39,860	51,775	94,635
Montgomery Coal Co.	Consolidated	12,230	8,681	20,914
Montgomery Coal Co.	Mt. Morris.....	9,250	10,370	19,720
Totals .....	.....	597,796	695,272	1,293,068
MASON COUNTY.				
Camden Clay Co.	Camden.....	5,974	2,982	8,956
Beach Grove Coal Co.	Beach Grove.....	2,678	3,035	5,713
Hope Salt & Coal Co.	Hope.....	7,501	7,210	14,711
Mason City Mining Co.	Mason	5,357	5,357	10,714
Liverpool Salt & Coal Co.	Liverpool	5,112	5,143	10,285
Hartford Salt & Coal Co.	Hartford	7,355	7,611	14,946
Consumers C. & Mining Co.	New Haven.....	23,170	18,372	41,542
Totals .....	.....	57,157	49,710	106,867
PUTNAM COUNTY.				
Carver Coal Co.	Plymouth.....	20,405	25,802	46,207
Marmet-Smith C. & M. Co.	Flourance.....	61,936	55,861	117,797
Totals .....	.....	82,341	81,663	164,004

1898-99.

KANAWHA COUNTY				Coke (tons of 2000 lbs.)		
Coal (tons of 2210 lbs.) Distribution.				Production.		
Used in operating mine.	Sold to local trade and tenants.	Used in Coke ovens.	Quantity Shipped.	First six months.	Second six months.	Total for the year.
			2,072			
	59		9,733			
60	75		6,515			
648	443		62,270			
648	413		93,383			
	17		6,652			
	233		10,643			
	116		53,125			
	500		20,700			
53	312		35,158			
232	580		12,561			
519	378		50,977			
67	423		5,337			
625	383		55,439			
			192			
	656		56,100			
			2,290			
360	397	11,611	62,197	5,128	5,855	10,983
460	300		12,800			
75			3,675			
300	500		18,200			
300	150		37,050			
1,500	6,829		177,289			
	500		51,247			
			71,001			
	556		25,171			
91	621		19,808			
177	158		12,890			
			17,855			
	303		18,831			
	175		20,332			
2,300	181		91,851			
	501		20,413			
	1,747		18,003			
8,385	18,086	11,611	1,251,953	5,128	5,855	10,983
MASON COUNTY.						
	5,416		3,510			
112			5,571			
	14,711					
	10,714					
	10,285					
881	11,065					
1,186	1,417		38,939			
2,209	56,638		48,020			
PUTNAM COUNTY.						
1,046	325		44,836			
	2,868		111,939			
1,046	3,483		159,775			

Production of Coal and Coke for 1898-99.

FAYETTE COUNTY.		Coal (tons of 2240 lbs.) Production.		
Name of Company.	Name of Mine.	First six months.	Second six months.	Total for the year.
Longacre Colliery Co	Longacre	12,708	28,981	41,689
W. R. Johnson & Co	Block or No. 5	1,871	2,364	7,225
W. R. Johnson & Co	Gas or No. 2	2,437	3,111	5,551
Boomer Coal & Coke Co	Boomer	31,362	31,165	65,827
M. T. Davis & Co	Enreka	13,870	11,000	27,860
M. T. Davis & Co	No. 5 Block	21,200	19,775	43,975
Mecca Coal & Coke Co	Mecca	27,052	29,330	56,381
Coal Valley Mining Co	Straughtan	1,678	5,849	10,527
Carver Brothers	Eagle	13,071	17,194	30,565
Carver Brothers	Edgewater No. 1	11,327	8,812	20,169
Carver Brothers	Edgewater No. 2	16,988	19,856	36,844
Carver Brothers	Edgewater No. 5	28,317	32,977	61,294
The St. Clair Co	No. 2	8,997	12,558	21,555
The St. Clair Co	No. 1	21,773	18,430	40,203
Vance Coal Co	Forest Hill	12,775	10,516	23,291
J. F. Burdett	Diamond	32,573	32,374	64,747
W. R. Johnson	No. 2 Gas	26,832	22,365	49,197
W. R. Johnson	No. 5	28,655	31,182	60,337
W. R. Johnson	No. 1		3,123	3,123
Mt. Carbon Co., Ltd.	Excelsior	3,035	3,826	6,861
Mt. Carbon Co., Ltd.	Vulcan	61,177	85,961	147,438
Great Kanawha Colliery Co	No. 1 Gas	32,075	35,291	67,466
Great Kanawha Colliery Co	Digby	11,689	15,212	26,931
The Ganley Mountain C. Co	Ganley Mount'n	191,835	170,615	365,450
Deitz Coal & Coke Co	Gaymont	20,000	25,000	45,000
Sunnyside Coal & Coke Co	Sunnyside		1,000	1,000
New River Mining Co	Elmo	18,000	9,000	27,000
Masterson Coal & C. Co	Masterson		3,858	3,858
Fayette Coal & Coke Co	Fayette	21,000	25,000	46,000
Nuttallburg C. & C. Co	Nuttallburg	36,851	35,033	71,917
Nuttallburg C. & C. Co	Keeneys Creek	2,970	18,213	21,183
Brown Coal Co	Brown	18,000	22,000	40,000
Boone Coal & Coke Co	Boone	16,151	25,202	41,353
Ballinger Coal Co	Ballinger No. 2	9,301	9,110	18,711
Ballinger Coal Co	Ballinger No. 1	17,102	28,126	45,528
Blume Coal & Coke Co	Blume	26,360	100,000	126,360
Smokeless Coal Co	Smokeless	18,108	21,772	39,880
Rothwell Coal Co	Dubree	6,952	3,170	10,122
Rothwell Coal Co	Quarrier	9,679	16,200	25,879
South Caperton Mining Co	Caperton	3,500	3,500	7,000
New River Coke Co	South Side	10,000	60,000	100,000
New River Coke Co	North Side	26,120	27,632	51,052
Longdale Iron Co	Sewell		31,712	31,712
Cumard Coal Co	Cumard	13,891	18,156	32,047
Brooklyn Coal Co	Brooklyn	17,002	25,683	42,685
Fire Creek C. & C. Co	Fire Creek	39,605	39,877	79,482
Central Coal Co	Central	35,131	37,380	72,51
Echo Coal & Coke Co	Echo	81,821	45,089	129,910
Red Ash Coal Co	Red Ash	18,194	58,597	107,091
Rush Run Coal & Coke Co	Rush Run	28,858	37,318	66,206
Thurmond Coal Co	Thurmond	59,026	62,871	121,89
Henry Coal & Coke Co	Stone Cliff	29,058	36,738	65,296
Dimmock Coal & Coke Co	Dimmock	20,000	20,000	40,000
Beechwood Coal & C. Co	Beechwood	30,108	51,314	81,722
Alaska Coal & Coke Co	Alaska	29,213	46,753	75,996
Slater Coal Co	Slater	11,796	6,230	21,135

1898-99

FAYETTE COUNTY.				Coke (tons of 2000 lbs.) Production.		
Coal (tons of 2240 lbs.) Distribution.				First six months.	Second six months.	Total for the year.
Used in Operating mine.	Sold to local trade and tenants	Used in Coke Ovens	Quantity Shipped.			
.....	125	1,417	40,147	.....	567	567
.....	.....	.....	7,235	.....	.....	.....
.....	.....	.....	5,551	.....	.....	.....
305	333	.....	65,180	.....	.....	.....
.....	.....	.....	27,860	.....	.....	.....
500	350	.....	43,125	.....	.....	.....
286	357	.....	55,748	.....	.....	.....
50	140	.....	10,337	.....	.....	.....
964	.....	28,110	1,191	8,602	10,138	18,740
.....	.....	.....	118,307	.....	.....	.....
.....	.....	.....	21,555	.....	.....	.....
.....	.....	40,203	.....	13,996	13,851	27,847
100	.....	.....	23,191	.....	.....	.....
755	348	.....	63,614	.....	.....	.....
249	.....	16,979	31,978	9,646	12,467	22,083
960	2,700	14,500	41,977	.....	.....	.....
.....	.....	3,123	.....	.....	.....	.....
.....	.....	.....	6,861	.....	.....	.....
1,408	3,462	85,581	56,987	25,593	29,373	54,966
.....	.....	30,000	37,466	10,085	11,972	22,057
2,000	2,500	.....	25,431	.....	.....	.....
503	1,051	62,333	301,557	20,733	13,928	40,661
250	.....	12,000	32,750	4,000	5,000	9,000
80	80	1,800	2,010	.....	1,200	1,200
400	600	.....	26,000	.....	.....	.....
.....	170	.....	3,688	.....	.....	.....
.....	1,800	6,500	37,700	2,000	2,000	4,000
600	1,200	35,692	34,125	9,448	8,400	17,848
.....	400	.....	20,783	.....	.....	.....
.....	1,200	.....	38,800	.....	.....	.....
50	2,250	.....	39,053	.....	.....	.....
.....	.....	.....	18,714	.....	.....	.....
.....	347	.....	45,181	.....	.....	.....
300	850	.....	125,210	.....	.....	.....
.....	250	.....	39,630	.....	.....	.....
.....	.....	.....	10,422	.....	.....	.....
30	300	.....	25,549	.....	.....	.....
.....	.....	.....	7,000	.....	.....	.....
850	500	.....	97,291	.....	.....	.....
500	1,000	54,111	.....	17,000	20,363	37,363
.....	.....	30,001	1,711	.....	18,006	18,006
.....	353	.....	31,691	.....	.....	.....
.....	468	.....	42,217	.....	.....	.....
300	1,394	38,488	39,330	12,774	13,594	26,368
1,200	1,000	16,358	53,956	6,411	6,622	13,033
446	.....	26,785	102,679	10,000	12,000	22,000
102	660	23,282	71,047	10,595	11,680	22,275
300	600	.....	65,246	.....	.....	.....
625	938	.....	120,331	.....	.....	.....
100	1,191	14,798	48,407	4,533	3,284	7,917
300	1,500	.....	38,200	.....	.....	.....
.....	960	7,200	73,562	2,400	2,400	4,800
.....	1,500	5,826	68,670	2,167	2,084	4,251
.....	.....	.....	21,135	.....	.....	.....

Production of Coal and Coke 1898-99.

FAYETTE COUNTY, Con'd.		Coal (tons of 2240 lbs.) Production.		
Name of Company.	Name of Mine.	First six months.	Second six months.	Total for the year.
Harvey Coal & Coke Co.	Harvey No 1 & No 2	55,500	67,300	122,800
Star Coal & Coke Co.	Star	50,922	59,723	110,645
Collins Colliery Co.	Collins No 1 & No 2	100,876	87,189	188,065
Sun Coal & Coke Co.	Sun	19,851	73,307	123,158
Dunloop Coal & Coke Co.	Dunloop	30,030	50,000	80,030
Turkey Knob Coal Co.	Turkey Knob	19,167	56,700	106,167
Macdonald Colliery Co.	Macdonald	59,056	71,923	151,979
Sugar Creek C. & C. Co.	Sugar Creek	51,015	56,611	107,650
Quinnimont Coal Co.	Old Mine	17,005	11,389	32,084
Quinnimont Coal Co.	Big O No. 3	18,075	15,986	34,041
Robins Coal Co.	Robins	15,922	12,879	28,801
Laurel Creek Coal Co.	Laurel Creek	27,122	25,053	52,885
Greenwood Coal Co.	Greenwood	165,000	50,000	255,000
Totals		2,120,921	2,325,515	4,116,460
RALEIGH COUNTY.				
Royal Coal & Coke Co.	Royal	11,756	18,611	33,370
Totals		11,756	18,611	33,370
MINGO COUNTY.				
Camp Branch C. & C. Co.	Camp Branch		21,128	21,128
Van Kirk C. & Mining Co.	Freeport		1,000	1,000
Logan Consolidated C. Co.	Logan	13,215	58,388	101,003
Thacker Coal & Coke Co.	Thacker	55,110	17,191	102,331
Mingo Coal & Coke Co.	Mingo	3,731	11,708	15,112
Lynn Coal & Coke Co.	Lynn		33,029	33,029
Dingess Coal & Coke Co.	Dingess	2,232	2,232	4,464
Grapevine Coal Co.	Grapevine	23,101	26,830	49,931
Lick Fork Coal & Coke Co.	Lick Fork		18,000	18,000
Totals		137,325	222,869	350,294
McDOWELL COUNTY.				
Day Coal Co.	Day	1,862	1,384	3,245
Tidewater C. & C. Co.	Tidewater	38,198	26,805	75,333
Bottom Creek C. & C. Co.	Bottom Creek	38,327	15,111	83,166
Peerless C. & C. Co.	Peerless	16,860	52,119	99,309
Empire Coal & Coke Co.	Empire	37,250	29,131	76,381
Shawnee Coal & Coke Co.	Shawnee	56,125	59,150	115,275
Europe Coal & Coke Co.	Europe	18,697	55,078	103,705
Pulaski Iron Co.	Pulaski	89,700	102,800	192,300
Keystone C. & C. Co.	Keystone	16,682	11,002	30,684
Algoma Coal & Coke Co.	Algoma	107,178	119,954	220,632
Gilliam Coal & Coke Co.	Gilliam	13,121	17,905	31,026
Rolle Coal & Coke Co.	Rolle	11,817	13,091	27,908
Roanoke Coal & Coke Co.	Roanoke	11,011	11,797	22,808
Indian Ridge C. & C. Co.	Indian Ridge	15,261	12,898	38,159
Arlington C. & C. Co.	Arlington	12,570	13,598	26,168
Greenbrier C. & C. Co.	Greenbrier	12,251	18,066	30,319
McDowell C. & C. Co.	McDowell	11,205	15,367	26,572
Ashland Coal & Coke Co.	Ashland	11,620	15,330	26,950
Elk Ridge C. & C. Co.	Elk Ridge	11,161	15,799	26,960
Lynchburg C. & C. Co.	Lynchburg	55,904	53,200	109,104
Powhatan C. & C. Co.	Powhatan	61,198	72,081	133,502
Upland C. & C. Co.	Upland No 1 & No 2	81,123	59,611	143,737

1898-99.

FAYETTE COUNTY Con'd.				Coke (tons of 2000 lbs.) Production.		
Coal (tons of 2240 lbs.) Distribution.				First six months.	Second six months.	Total for the year.
Used in Operating Mine.	Sold to local trade and tenants.	Used in coke ovens	Quantity Shipped.			
4,000	1,100	52,500	63,200	12,000	12,000	24,000
1,000	700		108,915			
600	600	51,015	131,049	16,958	19,053	36,011
	3,000		121,958			
	1,000		87,000			
	1,275		105,467			
1,500	1,500		150,703			
	1,500		104,659			
	1,827	15,350	14,887	4,298	4,874	9,172
	1,140	14,841	77,775	4,887	5,914	10,801
	600		28,204			
	1,200		51,685			
			255,000			
21,404	17,553	700,821	3,674,791	208,029	216,900	424,929
RALEIGH COUNTY.						
500	1,000	32,945	58,925	11,733	8,659	20,398
500	1,000	32,945	58,925	11,733	8,659	20,398
MINGO COUNTY.						
	428		21,000			
			4,000			
100	100		100,203			
	2,000		109,344			
	160		45,282			
	150		32,879			
			4,469			
			19,994			
	120		17,880			
1,000	3,258		316,036			
MCDOWELL COUNTY.						
48	215		2,952			
	619		51,740	8,271	6,628	14,899
253	367	19,954	37,193	9,856	10,161	20,017
		25,534	73,775	9,932	8,916	18,848
480	125	33,261	32,514	8,471	9,648	18,119
1,200	850	41,520	70,005	13,200	14,000	27,200
		36,812	66,893	14,594	13,206	27,799
	1,321	95,075	95,304	32,075	32,503	64,578
		28,756	61,928	8,754	8,672	17,426
		91,698	128,734	31,418	30,162	61,580
1,200	1,050	32,521	56,256	9,575	10,753	20,328
	1,170	32,115	51,623	11,200	10,209	21,409
651		30,525	57,622	12,084	10,708	22,792
	150	36,205	51,804	12,452	11,965	24,417
250	1,000	34,459	50,459	11,500	10,037	21,537
		30,399	39,321	8,391	11,680	20,071
100	200	26,479	39,853	9,577	10,191	19,768
360	272	29,560	36,758	9,531	10,173	19,704
		28,175	62,085	13,998	14,003	28,001
		33,556	75,548	13,251	13,877	27,128
		38,550	97,952	20,091	19,482	39,573
	1,695	33,928	108,114	23,621	2,565	26,186

Production of Coal and Coke 1898-99.

McDOWELL COUNTY, Cont'd.		Coal (tons of 2240 lbs.) Production.		
Name of Company.	Name of Mine.	First six months.	Second Six months.	Total for the year.
Houston Coal & Coke Co	Houston.	70,817	71,822	142,639
Crozer Coal & Coke Co	Crozer No 1 & No 2	129,813	151,510	281,323
Turkey Gap Coal & Coke Co	Turkey Gap	111,526	121,751	233,277
Norfolk Coal & Coke Co	Norfolk Colliery	77,625	83,375	161,000
Norfolk Coal & Coke Co	Lick Branch Colly.	53,410	56,167	109,577
Norfolk Coal & Coke Co	Angle Colliery	26,300	31,034	57,334
Shamokin Coal & Coke Co	Shamokin	62,479	66,330	128,809
Elkhorn Coal & Coke Co	Elkhorn	73,422	82,636	156,058
Totals		1,710,977	1,805,691	3,516,668
MERCER BOUNTY.				
Coaldale Coal & Coke Co	Coaldale	90,628	93,223	183,851
Mill Creek C. & C. Co	Stirling E. & W	60,948	61,062	122,010
Klondike Coal & Coke Co	Klondike	6,000	5,553	11,553
Buckeye Coal & Coke Co	Buckeye	51,111	51,953	103,067
Caswell Creek C. & C. Co	Caswell Creek	103,601	106,190	215,881
Booth-Bowen C. & C. Co	Booth-Bowen	86,217	96,557	182,774
Louisville C. & C. Co	Louisville	41,242	41,432	82,694
Goodwill Coal & Coke Co	Goodwill	38,224	37,538	75,762
South-W. Va. Imp. Co	Part of E. & W	80,000	86,666	166,666
		561,061	580,197	1,141,258

1898-99.

MCDOWELL COUNTY, Cont'd				Coke (tons of 2000 lbs.) Production.		
Coal (tons of 2210 lbs. Distribution)				First six months.	Second six months.	Total for the year.
Used in operating mine.	Sold to local trade and tenants.	Used in coke ovens.	Quantity shipped.			
1,500	1,000	57,616	82,253	17,790	18,220	36,010
2,441		108,589	170,233	75,718	49,579	125,297
		98,039	135,208	28,103	33,190	61,293
2,000	2,000	45,600	111,400	14,850	15,550	30,400
500	600	52,800	55,577	17,948	17,637	35,585
500	500	14,000	42,964	4,617	4,756	9,373
100	600	30,665	97,141	11,598	11,437	23,035
600	2,393	57,246	95,819	17,861	22,211	40,072
12,533	16,188	1,241,926	2,245,961	481,587	441,579	923,166
MERCER COUNTY						
1,000	1,306	35,482	146,063	13,267	11,443	24,710
1,000	874	70,321	49,815	25,171	24,533	49,704
			11,553			
700		21,792	80,575	6,867	6,751	13,618
312	1,608	31,369	182,592	11,409	12,236	23,645
300	1,232	35,974	145,268	10,613	11,870	22,483
		27,605	55,089	11,212	9,400	20,612
200	367	19,102	56,033	6,574	6,566	13,140
		41,000	125,666	12,000	13,000	25,000
3,512	5,387	282,645	852,714	97,113	95,819	192,932

To show the relative position as coal and coke producing counties the following table is submitted with the rank of each:

Coal and coke production in West Virginia for the fiscal year ending June 30th, 1899.

NAME OF COUNTY.	No. of Mines.	Coal (tons of 2,240 lbs.)			Coke (tons of 2,000 lbs.)			Order in production.	
		1st 6 Months.	2nd 6 Months.	Total.	1st 6 Months.	2nd 6 Months.	Total.	Coal.	Coke.
Barbour	3	39,770	23,705	63,475	3,720	2,260	5,980	17	9
Brooke	3	30,972	33,101	64,073				18	
Hancock	2	25,031	11,105	36,136				20	
Harrison	12	203,766	203,381	413,147	2,337	3,381	5,871	8	10
Marion	15	1,115,859	1,217,121	2,332,980	65,712	50,273	155,985	3	1
Marshall	1	119,211	111,589	230,800				12	
Mineral	3	272,111	282,115	554,226				6	
Monongalia	2	11,121	12,368	23,489		5,201	5,201	19	11
Ohio	3	58,016	61,911	119,927				11	
Preston	3	133,112	111,931	245,043	18,210	13,733	31,943	10	6
Randolph	1	12,597	19,368	31,965				21	
Taylor	3	91,100	15,003	106,103				11	
Tucker	6	221,017	203,021	424,038	65,892	71,716	140,608	7	5
Kanawha	36	367,796	695,272	1,063,068	5,128	5,855	10,983	1	8
Mason	7	57,157	19,710	76,867				15	
Putnam	2	82,311	81,663	163,974				13	
Fayette	71	2,120,921	2,325,515	4,446,436	208,009	216,900	424,909	1	2
Raleigh	1	11,756	18,611	30,367	11,739	8,659	20,398	16	7
Mingo	9	127,125	222,833	350,958				9	
McDowell	32	1,710,977	1,806,020	3,516,997	181,587	111,579	323,166	2	1
Meer	11	361,061	580,197	941,258	97,113	95,819	192,932	5	3
Small Mines		75,000	75,000	150,000					
Total	237	7,758,567	8,491,583	16,250,150	959,817	900,362	1,960,179		

CHAPTER III.

MACHINE MINING.

In 1898 there were 28 firms in eight counties of the State using 96 mining machines, the production of which amounted to 1,070,293 tons of coal of 2,240 lbs. During the present year the number of firms increased to 41; the number of counties 10, the number of machines increased to 141 and the tons of machine coal increased to 1,733,279,—making a gain of two counties, thirteen firms, forty-five machines and 662,986 tons of coal.

The use of machines is on the increase and in a few years the machine mined coal will be a large factor of the product.

Summary of the Production of Machine Mined Coal in the State,
1899.

County.	No. of firms using Machines.	No. of machines used.	Production of machine mined coal (tons of 2,240 lbs.)	No. of machine miners.	No. of machine runners and helpers.	Total No. of machine men employed.	District in which located.	Remarks.
Barbour.....	1	12	8,000	..	2	2	First	
Marion.....	1	17	581,077	275	49	324	First	
Marshall...	1	3	89,285	72	12	84	First	
Tucker.....	1	1	11,540	27	4	31	First	
Kanawha ..	9	35	249,099	308	67	375	Second	
Fayette.....	11	51	291,879	269	79	348	Third	
Nicholas ..	1	2	..	12	6	18	Third	
Mingo.....	1	3	80,163	52	12	64	Fourth	
McDowell..	5	13	322,236	108	24	132	Fourth	
Mercer.....	1	7	100,000	200	48	248	Fourth	
Totals	41	141	1,733,279	1,323	273	1596		
1898	28	96	1,070,293	750	183	933		
Gain	13	45	662,986	573	90	663		

Companies Operating Mining Machines and the Quantity of Coal Produced, 1899.

County.	Name of Company.	No. of mine machines.	Tons of coal produced (2240 lbs.)	No. of machine miners.	No. of machine runners and helpers.	Total No. of men employed by machine mining.	District.
Barbour ..	Philippi Coal Co	2	8,000		2	2	1
Marion ...	West Fairmont C. & C. Co	6	229,286	130	24	154	1
"	Monongah C. & C. Co	5	140,303	85	15	100	1
"	Monongah C. & C. Co	4	161,488	80	10	90	1
"	J. A. Clark C. & C. Co	3					1
Marshall	Glendale C. & C. Co	3	89,285	72	12	84	1
Tucker ..	Cumberland Coal Co	1					1
"	Davis C. & C. Co	3					1
"	Davis C. & C. Co	2	6,049	14	2	16	1
"	Davis C. & C. Co	1	5,491	13	2	15	1
Kanawha	Campbell's Creek C. Co	5	43,848	46	16	62	2
"	Kelley's Creek Mining Co	4	51,901	51	6	57	2
"	Kelley's Creek Mining Co	2	5,447	20	4	24	2
"	Kelley's Creek Mining Co	1	56,147	65	6	71	2
"	Riverside Coal Co	3	27,378	30	5	35	2
"	Winifrede Coal Co	5	24,234	30	10	40	2
"	Stevens Coal Co	5	20,215	20	6	26	2
"	Charlmore Coal Co	3	10,500	30	6	36	2
"	Chesapeake Mining Co	1	9,106	16	8	24	2
Fayette	Longacre Colliery Co	8	30,282	40	16	56	3
"	Boomer C. & C. Co	3	45,030	56	10	66	3
"	M. T. Davis & Co	4	43,975	25	8	33	3
"	The St. Clair Co	1	1,633				3
"	The St. Clair Co	1	5,035	10	2	12	3
"	W. R. Johnson & Co	1	3,123	10	6	16	3
"	Caperton C. & C. Co	1		25	2	27	3
"	Mt. Carbon Co. Ltd	3			2	2	3
"	New River Mining Co	1					3
"	Gt. Kanawha Colliery Co	3	38,411	10	6	16	3
"	Brooklyn C. Co	7	29,015	21	7	31	3
"	Red Ash C. Co	8	76,645	50	14	64	3
"	Rush Run C. & C. Co	5	3,610	9	4	13	3
"	Quinnimont C. Co	2	15,000	10	2	12	3
Nicholas.	Greendale C. & C. Co	2		12	6	18	3
Mingo ..	Logan Consolidated C Co	3	80,163	52	12	64	4
McDowell...	Peerless C. & C. Co	3	4,973	4	6	10	4
"	Pulaski Iron Co	5	133,750	25	6	31	4
"	Pland C. & C. Co	2	71,868	20	4	24	4
"	Crozer C. & C. Co	2	68,375	40	6	46	4
"	Norfolk C. & C. Co	2	40,250	19	2	21	4
Mercer ..	South-W. Va. Imp. Co	1	100,000	200	18	218	4
	Total	141	1,723,279	1323	273	1596	

Number and kinds of mining machines in the State-1899

Name of Company.	Electrical mine machines.					Compressed air mine machine.		Total machines.	Tons of coal produced by machines (tons of 2240 lbs.)	County.
	Jeffrey.	General Electric.	Morgan-Gardner.	Beury.	Link Belt.	Sullivan.	Harrison.			
Philippi Coal Co.	2							2	8,000	Barbour.
West Fairmont C. & C. Co.	6							6	229,286	Marion.
Monongah C. & C. Co.	1		4					5	190,303	Marion.
Monongah C. & C. Co.			4					4	161,488	Marion.
J. A. Clark C. & C. Co.	3							3		Marion.
Glendale C. & C. Co.			3					3	89,285	Marshall.
Cumberland C. Co.						1		1	27,270	Tucker.
Davis Coal & C. Co.		3						3		Tucker.
Davis Coal & C. Co.						2		2	6,019	Tucker.
Davis Coal & C. Co.						1		1	5,191	Tucker.
Campbell's Creek C. Co.	5							5	13,848	Kanawha.
Kelley's Creek Mining Co.			4					4	51,904	Kanawha.
Kelley's Creek Mining Co.			2					2	5,467	Kanawha.
Kelley's Creek Mining Co.			4					4	56,417	Kanawha.
Riverside Coal Co.			3					3	27,378	Kanawha.
Winifrede Coal Co.			2		3			5	21,234	Kanawha.
Chesapeake Mining Co.			4					4	9,105	Kanawha.
Stevens Coal Co.	5							5	20,215	Kanawha.
Charlmore Coal Co.	3							3	10,500	Kanawha.
Longacre Colliery Co.						3		3	30,282	Fayette.
Boomer C. & C. Co.			3					3	15,030	Fayette.
M. T. Davis & Co.	4							4	13,975	Fayette.
The St. Clair Co.	1							1	1,693	Fayette.
The St. Clair Co.	1							1	5,035	Fayette.
W. R. Johnson & Co.						4		4	3,123	Fayette.
Mt Carbon Co., Ltd.						1		1		Fayette.
New River Mining Co.				1				1		Fayette.
Gt. Kanawha Colliery Co.	3							3	38,411	Fayette.
Brooklyn C. Co.						1		1	29,015	Fayette.
Red Ash Coal Co.								8	76,615	Fayette.
Rush Run C. C. & Co.								5	3,610	Fayette.
Caperton C. & C. Co.			1					1		Fayette.
Quinnimont C. Co.					2			2	15,000	Fayette.
Greendale C. & C. Co.			2					2		Nicholas.
Logan Consolidated C. Co.					3			3	80,463	Mingo.
Peerless C. & C. Co.						2		2	4,973	McDowell.
Pulaski Iron Co.	5							5	136,750	McDowell.
Upland C. & C. Co.	2							2	71,808	McDowell.
Crozer C. & C. Co.	2							2	68,335	McDowell.
Norfolk C. & C. Co.					2			2	40,250	McDowell.
South-W. Va., Imp. Co.	7							7	100,000	Mercer.
Total.	50	3	36	1	10	15	26	111		
Total 1898.	49	7	19	1	6	1	13	96		
Gain.	1		17		4	14	13	45		
Loss.		4								

CHAPTER IV.

COKE AND COKE OVENS.

Of the 8,915 ovens in the State 6,884 were operated for 272 days during the year, producing 1,950,179 tons of coke, in the production of which there were used 3,144,352 tons of coal,— making the yield of coke 62 per cent. of the coal used, and each oven having a production of 283¹/₃ tons for the year.

In the operation of the ovens in eleven counties at 88 coke plants there were employed 3,013 men.

Tons of coal used in coke ovens, tons of coke produced, yield of coke, ovens reported, average number ovens operated, days active and men employed at the coke ovens, 1899.

Counties.	No. of coke plants reported.	Total tons of coal used in the ovens (2,000 lbs.)	Total tons of coke produced (2,000 lbs.)	Percentage of yield.	Total No. of coke ovens reported.	Total No. of coke ovens reported not in use	Average No. of coke ovens operated during the year.	Average No. of days the ovens were operated.	Average No. of men employed at ovens.	District.
Barbour	1	8,909	5,980	67.1	10	10	10	225	3	1
Harrison	1	10,777	5,871	54.5	42	42	20	300	5	1
Marion	10	283,338	155,985	55.1	875	296	573	258	202	1
Monongalia	2	9,128	5,201	57.0	70	70	50	55	13	1
Preston	3	62,196	34,023	54.7	133	31	102	277	30	1
Tucker	6	221,263	110,638	62.7	657	35	622	211	271	1
Kanawha	2	16,102	10,983	85.2	102	52	50	120	35	2
Fayette	26	784,919	451,999	57.9	1765	91	1674	235	438	3
Raleigh	1	36,899	20,398	55.2	78	78	78	365	15	3
McDowell	20	1,330,958	923,166	68.1	3782	328	2841	295	1308	1
Mercer	8	316,563	192,932	60.9	1111	586	855	306	687	1
Totals	88	3,144,352	1,950,179	62.	8915	2031	6884	272	3013	

Total number of coke ovens in the State	8915
Average number of ovens operated during the year	6884
Average number of days active during the year	272
Average percentage of yield	62.
Tons of coke produced per oven in operation	283 ¹ / ₃

Table showing tons of coal converted into coke, tons of coke produced and number of ovens in and out of use for 1899

County.	Name of Company.	Tons of coal used in ovens (tons of 2,000 lbs.)	Total tons of coal used in counties.	Tons of coke produced (tons of 2,000 lbs.)	Total tons of coke produced in county.	No. coke ovens reported.	Total No. ovens reported in county.	Average No. ovens in use.	Average days ovens were operated.
Barbour	Junior Coal Co	8,504	8,504	5,980	5,980	10	10	10	295
Harrison	Briar Hill C. & C. Co	10,777	10,777	5,871	5,871	22	22	20	300
Marion..	West Fairmont C. & C. Co.	45,555		24,106		94		50	365
"	West Fairmont C. & C. Co.	3,739		1,193		36		9	100
"	Gaston Gas C. Co	28,431		15,757		30		60	100
"	Montana C. & C. Co	19,839		28,258		158		100	300
"	Mason C. & C. Co	22,002		11,786		50		50	313
"	Briar Hill C. & C. Co	4,125		2,247		30		30	60
"	Va. & Pittsburg C. & C. Co	18,179		12,986		41		40	217
"	Monongah C. & C. Co	87,418		44,985		222		120	270
"	Monongah C. & C. Co					101		80	270
"	Worthington C. & C. Co	23,520	283,338	14,067	155,985	50	875	40	313
Monongalia..	Opekska C. & C. Co	7,952		4,164		20		20	150
"	Patterson-Reisinger C. & C. Co	1,176	9,128	740	5,204	30	50	30	14
Preston..	Anstine Coke Works	56,649		31,166		83		82	313
"	Oakland C. & C. Co	5,517	62,196	2,557	31,023	50	133	20	100
Tucker	Cumberland C. Co	63,001		44,650		135		120	313
"	Davis C. & C. Co	14,259		8,487		40		40	286
"	Davis C. & C. Co	9,458		5,630		22		22	300
"	Davis C. & C. Co	312		203					
"	Davis C. & C. Co	60,984		36,300		208		198	185
"	Davis C. & C. Co	76,219	224,263	45,368	140,638	252	657	242	255
Kanawha.	Brannon Coal Co					12			
"	Cannelton Coal Co	16,402	16,402	10,983	10,983	90	102	50	120
Fayette	Longacre Colliery Co	1,587		567		26		20	313
"	Carver Brothers	31,483		18,740		54		54	
"	The St. Clair Co	45,027		27,847		78		75	300
"	W. R. Johnson	19,016							
"	W. R. Johnson	16,210		22,083		94		94	302
"	W. R. Johnson	3,497							
"	Mt. Carbon Co., Ltd	95,850		54,966		202		189	312
"	Gt. Kanawha Colliery Co	33,600		22,057		66		66	
"	Ganley Mountain C. Co	69,817		40,664		102		102	310
"	Deitz Coal & Coke Co	13,440		9,000		25		24	295
"	Summerville C. & C. Co	2,016		1,200		18		18	100
"	Fayette C. & C. Co	7,280		4,000		12		12	365
"	Nuttallburg C. & C. Co	39,976		17,848		72		60	300
"	New River Coke Co	60,605		37,363		135		125	300
"	Longdale Iron Co	33,602		18,006		212		197	

Table showing number of Coke ovens not in use, by counties,
1898-99.

Name of County.	No. of ovens not in use.	Field in which located.
Marion	236	Upper Monongahela.
Harrison	2	" "
Preston	31	" "
Tucker	35	Upper Potomac.
Kanawha	52	Kanawha.
Fayette	91	New River.
McDowell	938	Pocahontas.
Mercer	583	"
Total	2031	

Table showing number of coke ovens not in use 1898-99.

Name of County	Name of Company	No. of ovens not in use	Field in which coke plants are located
Marion	West Fairmont C. & C. Co	11	Upper Monongahela.
"	West Fairmont C. & C. Co	27	" "
"	Gaston Gas C. Co.	30	" "
"	Montana C. & C. Co	58	" "
"	Va. & Pittsburg C. & C. Co	1	" "
"	Monongah C. & C. Co	102	" "
"	Monongah C. & C. Co	21	" "
"	Worthington C. & C. Co	10	" "
Total..		296	
Harrison	Briar Hill C. & C. Co	2	Upper Monongahela.
Preston	Austin Coke Works	1	" "
"	Oakland C. & C. Co	20	" "
Total..		31	
Tucker	Cumberland C. Co	15	Upper Potomac.
"	Davis C. & C. Co	10	" "
"	Davis C. & C. Co..	10	" "
Total..		35	
Kanawha	Brannon C. Co	12	Kanawha.
"	Cannelton C. Co	10	" "
Total..		22	
Fayette	Longacre Colliery Co.	6	New River.
"	The St. Clair Co	3	" "
"	Mt. Carbon Co., Ltd	13	" "
"	Deitz Coal & Coke Co	1	" "
"	Nuttallburg C. & C. Co	12	" "
"	New River Coke Co.,	10	" "
"	Longdale Iron Co	15	" "
"	Fire Creek C. & C. Co	6	" "
"	Echo C. & C. Co	5	" "
"	Henry C. & C. Co	15	" "
"	Alaska C. & C. Co	2	" "
"	Quinnimont C. Co	3	" "
Total..		91	
McDowell	Tidewater C. & C. Co.	50	Pocahontas.
"	Bottom Creek C. & C. Co	12	" "
"	Peerless C. & C. Co	91	" "
"	Empire C. & C. Co	20	" "
"	Shawnee C. & C. Co	10	" "
"	Eureka C. & C. Co	31	" "
"	Pulaski Iron Co	9	" "
"	Keystone C. & C. Co	50	" "
"	Gilliam C. & C. Co	20	" "
"	Rolle C. & C. Co	10	" "
"	Roanoke C. & C. Co	10	" "
"	Indian Ridge C. & C. Co	25	" "
"	Arlington C. & C. Co	25	" "
"	Greenbrier C. & C. Co.	20	" "
"	McDowell C. & C. Co	34	" "
"	Ashland C. & C. Co.	25	" "
"	Elk Ridge C. & C. Co	20	" "
"	Lynchburg C. & C. Co	19	" "
"	Powhatan C. & C. Co.	96	" "
"	Upland C. & C. Co	75	" "
"	Crozer C. & C. Co	50	" "
"	Norfolk C. & C. Co	62	" "
"	Norfolk C. & C. Co	18	" "
"	Shamokin C. & C. Co	50	" "
Total..		938	
Monter	Mill Creek C. & C. Co.	15	Pocahontas.
"	Buckeye C. & C. Co	50	" "
"	Caswell Creek C. & C. Co	181	" "
"	Booth-Bowen C. & C. Co	99	" "
"	Goodwill C. & C. Co	5	" "
"	South-W. Va. Imp. Co.	236	" "
Total		586	

CHAPTER V.

The following table exhibits the prices paid the miners per ton of 2,240 lbs. for run-of-mine coal; wages paid trackmen and the selling price per ton of coal and coke on board the railroad cars at the mines and ovens by counties.

County.	Paid Mines per ton 2,240 lbs.	Trackmen's daily wages.	Selling price of.	
			Coal (ton of 2,240 lbs.)	Coke (ton of 2,000 lbs.)
Barbour.....	\$.38	\$ 1.50	\$.58	\$ 1.25
Brooke.....	.40	.70	.70	.....
Hancock.....	.40	1.00	3.40	.....
Harrison.....	.30	1.16	.49	.....
Marion.....	.35	1.55	.56	.99
Marshall.....	.42	1.72 ¹ / ₂	.62	.....
Mineral.....	.45	1.87	.81	.....
Monongalia.....	.28	1.47 ¹ / ₂	.50	.85
Ohio.....	.40	1.75	.68	.....
Preston.....	.35	1.15	.60	1.37
Randolph.....	.35	1.25	.45	.....
Taylor.....	.28	1.17	.43	.....
Tucker.....	.35	2.00	.78	1.46 ¹ / ₂
Kanawha.....	.41	1.62	.67	1.40
Mason.....	.44	1.36	.85	.....
Putnam.....	.40	1.57 ¹ / ₂	.70	.....
Fayette.....	.40	1.65	.68	1.56
Nicholas.....	.40	1.75	.....	.....
Raleigh.....	.40	1.75	.....	.....
Mingo.....	.38	1.56	.62	.....
McDowell.....	.30	1.73	.61	1.11 ¹ / ₂
Mercer.....	.30	1.68	.59	1.13
Average for State.....	\$.3612	\$1.61	\$.6319	\$1.25

Summary of wages paid machine miners, runners and helpers in West Virginia 1899.

County.	Paid machine miners.			Machine run- ners.	Machine runners paid by	Machine helpers
	R. of M.	By weight measure.	Equiv. to 2,240 lbs.			
Barbour.....	\$.20	2,240	\$.20	\$1.50	day.	\$1.20
Marion.....	.25	"	.25	.03	car.	1.75
Marshall.....	.37	"	.37	.00 ¹ / ₃	ton.	.....
Tucker.....	.29	"	.29	2.00	day.	1.50
Kanawha.....	.31	"	.34	2.05	"	1.63
Fayette.....	.21 ¹ / ₂	"	.21 ¹ / ₂	1.87	"	1.53
Nicholas.....	.....	"	.....	2.00	"	1.65
Mingo.....	.18 ¹ / ₃	"	.18 ¹ / ₃	2.25	"	1.60
McDowell.....	.11 ¹ / ₂	"	.11 ¹ / ₂	2.12 ¹ / ₂	"	1.50
Average.....	\$.241 ¹ / ₆	"	\$.241 ¹ / ₆	\$1.97	"	\$1.541 ¹ / ₂

Wages paid machine miners, runners and helpers in West Virginia, 1899.

County.	Paid Machine Miners.						Machine runners.	Machine runners paid by.	Machine helpers.
	R. of M.	Per day.	Per car.	By weight measure.	Bushels in car.	Equiv. to 3240 lbs.			
Barbour	\$.30	\$.....	"	car.	12	\$.20	\$ 1.50	day.	\$ 1.20
Average..	.....	.....	"	.....	.....	.20	1.50	day.	1.20
Marion	.32	.....	"	2240	.....	.32	.03	car.	1.75
"	.32	.....	"	2240	.....	.32	.....	.....	.....
Average..	.....	.....	"	.....	.....	.29	.03	car.	1.75
Marshall	1.32	.....	"	car.	100	.37	.00 ¹ / ₃	ton.	.....
Average..	.....	.....	"	.....	.....	.37	.00 ¹ / ₃	ton.	.....
Tucker	.35	.....	"	2240	.....	.35	.....	.....	.....
"	.40	.....	"	car.	12	.26 ² / ₃	2.00	day.	1.50
"	.35	.....	"	car.	24	.29	.....	.....	.....
"	.40	.....	"	car.	12	.26 ² / ₃	2.00	day.	1.50
Average..	.....	.....	"	.....	.....	.29	2.00	day.	1.50
Kanawha.	.43 ¹ / ₄	.....	"	2240	.....	.43 ¹ / ₄	.86 ¹ / ₂	100 bus.	.....
"	.34	.....	"	2000	.....	.38	2.00	day.	1.65
"	.34	.....	"	"	.....	.38	2.00	"	1.65
"	.34	.....	"	"	.....	.38	2.00	"	1.65
"	.35	.....	"	"	.....	.39	2.10	"	1.65
"	.34	.....	"	2240	.....	.34	2.05	"	1.55
"	.30	.....	"	2000	.....	.33	2.00	"	1.50
"	.42 ¹ / ₂	.....	"	2240	.....	.42 ¹ / ₂	2.00	"	1.80
"	.29	.....	"	"	.....	.29	.10	ton.	.....
Average..	.....	.....	"	.....	.....	.34	2.05	day.	1.63
Fayette	.....	2.00	"	.....	.....	.....	2.00	day.	1.50
"	.23 ¹ / ₂	.....	"	car.	36	.18 ¹ / ₃	.....	.....	.....
"	.....	.....	"	.....	.....	.....	2.00	day.	1.60
"	.....	.....	"	.....	.....	.....	2.00	"	1.60
"	.....	.....	"	.....	.....	.....	1.75	"	1.50
"	.....	2.00	"	.....	.....	.....	1.87 ¹ / ₂	"	1.50
"	.15	.....	"	car.	38	.11	2.00	"	1.60
"	.25	.....	"	2240	.....	.25	2.00	"	1.50
"	.23	.....	"	"	.....	.23	2.00	"	1.50
"	.20	.....	"	"	.....	.20	.....	.....	.....
"	.32	.....	"	"	.....	.32	.....	.....	.....
Average..	.....	2.00	.....	.....	.....	.21 ¹ / ₂	1.87	day.	1.53
Nicholas	.....	2.00	.....	.....	.....	.....	2.00	day.	1.65
Average..	.....	2.00	"	.....	.....	.....	2.00	day.	1.65
Mingo	.27 ¹ / ₂	.....	"	car.	12	.18 ¹ / ₃	2.25	day.	1.60
Average..	.....	.....	"	.....	.....	.18 ¹ / ₃	2.25	day.	1.60
McDowell	.25	.....	"	car.	.75	.09	2.00	"	1.50
"	.28	.....	"	"	.75	.10	2.25	"	1.50
"	.12 ¹ / ₂	.....	"	2240	.....	.12 ¹ / ₂	2.25	"	1.50
"	.40	.....	"	car.	.75	.15	2.00	"	1.50
Average..	.....	.....	"	.....	.....	.11 ¹ / ₂	2.12 ¹ / ₂	day.	1.50
Mercer	.....	.....	"	car.	.....	.....	.....	.....	.....

CHAPTER VI.

MINE LOCOMOTIVES.

In twelve Counties at sixty three mines there are used 64 steam, 24 electric and three compressed air mine locomotives, which are used for hauling the mine cars in and about the mines.

McDowell County leads with 26 steam, 3 electric and 2 air locomotives. Fayette is second with 11 steam, 6 electric and 1 air locomotives.

The tables following give the number of each kind used in the State.

Summary of the number of mine locomotives in use in the State, 1899.

Counties.	Locomotives			Number of mines using locomotives.	Mining district in which located.
	Steam.	Electric.	Compressed air		
Harrison	1	.....	.....	1	1
Marion	1	4	.....	3	1
Marshall .....	.....	1	.....	1	1
Taylor	1	.....	.....	1	1
Tucker	2	3	.....	3	1
Kanawha	7	2	.....	2	2
Mason	1	.....	.....	1	2
Putnam	2	.....	.....	2	2
Fayette	11	6	1	13	3
Mingo .....	.....	1	.....	1	4
McDowell	26	3	2	23	4
Mercer	12	4	.....	6	4
Totals	64	24	3	63	

Locomotives used in the mines, and kind, 1899.

County.	Name of firm.	Steam.	Electric.	Air.
Harrison	Pinnickinnick C. Co.	1	.....	.....
	Totals	1	.....	.....
Marion	Gaston Gas C. Co	1	.....	.....
"	Monongah C. & C. Co. No. 2	.....	2	.....
"	Monongah C & C. Co. No. 3	.....	2	.....
	Totals	1	4	.....
Marshall	Glendale C. Co.	.....	1	.....
	Totals	.....	1	.....
Taylor	J. H Henry, Lessor	1	.....	.....
	Totals	1	.....	.....
Tucker	Cumberland C. Co	2	.....	.....
"	Davis C. & C. Co., (Thomas Drift)	.....	2	.....
"	Davis C. & C. Co., (Coketon No. 3)	.....	1	.....
	Totals	2	3	.....
Kanawha	T. J. Mason	1	.....	.....
"	Campbell's Cr. C Co	.....	1	.....
"	Black Diamond M. Co.	2	.....	.....
"	Cannelton C. Co.	1	.....	.....
"	Big Black Band C. Co	1	.....	.....
"	Winifrede C. Co.	1	.....	.....
"	Stevens C. Co.	.....	1	.....
"	Chesapeake M. Co	1	.....	.....
	Totals	7	2	.....

Locomotives used in the mines, and kind, 1899.

County.	Name of firm.	Steam.	Electric.	Air.
Mason	Consumers C. & M. Co.	1	....
	Totals	1	....
Putnam	Carver C. Co.	1	....
"	Marmet Smith C. & M. Co.	1	....
	Totals	2	....
Fayette.	St. Clair Co. ....	....	1	
"	W. R. Johnson Crescent No. 5	1	....
"	Mt. Carbon Co. Ltd. ....	....	....	1
"	Gt. Kan. Coll. Co. Ltd. ....	....	1	
"	Gauley Mountain C. Co.	4	....
"	Fire Creek C. & C. Co.	1	....
"	Red Ash C. Co. ....	....	1	
"	Rush Run C. & C. Co. ....	....	1	
"	Thurmond C. Co. ....	....	2	
"	Alaska C. & C. Co.	1	....
"	Harvey C. & C. Co.	1	....
"	Star C. & C. Co.	1	....
"	Greenwood C. Co.	2	....
	Totals	11	6	1
Mingo	Logan Consolidated C. Co.		1	
	Totals		1	
McDowell	Tidewater C. & C. Co.	1	....
"	Bottom Creek C. & C. Co.	1	....
"	Peerless C. & C. Co.	1	....	2
"	Empire C. & C. Co.	1	....
"	Shawnee C. & C. Co.	1	....
"	Eureka C. & C. Co.	1	....
"	Pulaski Iron Co. ....	....	1	
"	Keystone C. & C. Co.	1	....
"	Algoma C. & C. Co.	1	....
"	Gilliam C. & C. Co.	1	....
"	McDowell C. & C. Co.	1	....
"	Ashland C. & C. Co.	1	....
"	Elkridge C. & C. Co.	1	....
"	Lynchburg C. & C. Co.	2	....
"	Powhatan C. & C. Co.	2	....
"	Upland C. & C. Co.	1	....
"	Houston C. & C. Co.	1	....
"	Crozer C. & C. Co.	1	1	
"	Turkey Gap C. & C. Co.	3	....
"	Norfolk C. & C. Co. (Norfolk) ....	....	1	
"	" " (Lick Branch)	1	....
"	Shamokin C. & C. Co.	1	....
"	Elkhorn C. & C. Co.	2	....
	Totals	26	3	

Locomotives used in the mines and kind, 1899.

County.	Name of firm	Steam.	Electric.	Air.
Mercer	Mill Creek C' & C. Co	2	...	
"	Buckeye C. & C. Co	2	...	
"	Caswell Creek C. & C. Co	2	...	
"	Booth-Bowen C' & C. Co	2	...	
"	Goodwill C. & C. Co.	1	...	
"	S-W. Va. Imp. Co.	3	4	
	Totals	12	4	

CHARTER VII.

TRANSPORTATION OF COAL AND COKE

The tables exhibiting the tons of coal and coke handled by the railroads are compiled from data furnished by the general freight agents of the various companies, and due acknowledgement is hereby given them for their valued services. To Hon. A. M. Scott, U. S. resident engineer, Charleston, is due credit for the tabulation of river shipments of coal given below.

Table exhibiting the total tons of coal and coke handled by the railroads in West Virginia for the fiscal year ending June 30th, 1899.

(Tons expressed are of 2000 lbs.)

Name of Railroad Company.	Total tons handled.		Tons consumed by R. R.	
	Coal.	Coke.	Coal.	Coke.
Baltimore & Ohio.....	3,894,709	391,061	417,408	10,740
Monongahela River.....	1,498,032	76,441	8,781	
W. Va. & Pittsburg.....	12,489	52	22,912	
W. Va. Central & Pittsburg	1,129,254	232,215	58,536	41
Kanawha & Michigan.....	703,222	23,387	30,623	
Norfolk & Western.....	3,576,613	1,058,077	.....
Chesapeake & Ohio.....	3,904,035	482,387	621,855	
Totals	15,018,354	2,263,620	1,160,115	10,781

Statement of the tonnage of coal and coke from the collieries in West Virginia, handled and transported by the
railroads in the State during the twelve months ending June 30, 1899.

[Quantities are expressed in tons of 2,000 lbs.]

Name of Railroad Company.	Total tons of coal handled.		Total tons of coke handled.		Tons originating on the line.		Tons delivered to the line by other railroads in West Virginia.		Tons delivered to other lines in West Virginia.		Tons of W. Va. fuel consumed by the line in the State.		Railroads and docks to which the product is delivered for		Points of destination of the product.	
	of coal	handled.	of coke	handled.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	distribution.	East.	West.
Baltimore & Ohio	3,891,709		391,061	1,530,096	102,681		2,361,742	288,380			117,408	10,740		Baltimore, Md. East of Baltimore, Md.		West of Ohio River.
Monongahela River R. R. Co.	1,498,062		76,441	1,498,062	76,441		None.	None.	1,489,251	76,441	8,781	None.		Baltimore, New York, Phila. and other eastern points.		Cleveland, Lorain, Sandusky for shipments by lakes, Chicago, St. L., &c.
W. Va. & Pittsburgh	12,189		52	12,189							22,942			Baltimore & O. R. R. Pennsylvania R. R.		
W. Va. C. & Pgh.	1,426,251		232,215	1,411,225	232,215		931	None.	76,498	18,476	58,536	11		Balt., N. Y. Phil. St. Amboy, N. J. Port Reading, N. J., &c.		
Kanawha & Michigan	763,222		23,387	657,107	16,465		10,114	6,892						T. & O. C. Ry. O. R. R. C. & O. Lamberth Pt. pier, Toledo docks, Sandusky docks, So. Ry. S. A. L. & O. C. Lines.	Newport News mostly.	Various points, Ohio, Mich., Ind., Ill. & Wis., & C.
Norfolk & Western	3,556,613		1,058,077	3,555,827	1,057,436		786	638			No record.			Tidewater, for 'gin port & At. coal Inland Va., N. & S. Carolina p'ts.		Cincinnati, lake points, Chicago and western cities.
Chesapeake & Ohio	3,904,665		482,387	3,845,005	482,387		18,872		40,101		621,855			C. & O. docks at Newport News and various railroads.	Coastwise, N. England and New York points.	Cincinnati, Louisville, Toledo, Chicago, & various p'ts too numerous to mention

COAL SHIPPED BY RIVER.

The Shipment for 1898 Beats the Record.

The shipment of coal *by river* from Gt. Kanawha collieries for the year ending Dec. 31, 1898, aggregates,

27,229,000 bushels or 1,089,160 tons.

This exceeds the river shipment of any previous year.

Between 1893 and 1897, inclusive, owing partly to the general depression in business and partly to low water seasons affecting navigation below the completed locks and dams, the coal shipments by river, as shown by the following table, did not increase but rather fell off, the output for 1897 running the lowest since 1888.

The effect of better times, and of the completion of the Gt. Kanawha slack-water are both plainly seen in the marked increase in the shipment for 1898.

Some new tipples are being built or planned and several of the old shippers are preparing to increase their river business. Altogether the prospects are good for a still larger output in 1899.

Table showing (both in bushels and tons) the amount of coal shipped *by river* from mines on the Great Kanawha for the several years named.

Year.	Bushels.	Tons.	Dates of completion of locks and dams on the Gt. Kanawha.
1875	4,048,300=	161,932	
1876	5,024,050=	200,962	
1877	5,183,650=	207,346	
1878	no record		
1879	" "		
1880	" "	....	Locks Nos. 4 and 5 were completed in 1880.
1881	9,628,696=	385,147	
1882	no record		Lock No. 3 was completed in 1882.
1883	15,370,458=	614,818	
1884	18,421,084=	736,843	
1885	17,812,323=	712,493	
1886	17,861,613=	714,465	Lock No. 6 was completed in 1886.
1887	23,233,374=	929,335	Lock No. 2 was completed in 1887.
1888	20,100,625=	804,025	
1889	26,921,789=	1,076,872	
1890	24,161,554=	966,462	
1891	25,761,346=	1,030,454	
1892	26,787,788=	1,071,511	

Year.	Bushels.	Tons.	Dates of completion of locks and dams on the Gt. Kanawha.
1893	22,983,000=	919,320	Lock Nos 7 & 8 completed in 1893
1894	25,821,000=	1,032,840	
1895	21,982,600=	879,304	
1896	23,050,000=	922,000	
1897	21,215,000=	848,600	Locks No. 9, 10 and 11 completed in 1898.
1898	27,229,000=	1,089,160	

U. S. Engineer office.
Charleston-Kanawha, W. Va., Jan. 30, 1899.

CHAPTER VIII.

POWDER USED AT THE MINES.

Incomplete record of the quantity of powder sold at the mines prevents this subject from being more fully discussed. The subjoined table is furnished for such information as it contains. In comparing the tables of previous years it is to be seen that the quantity of powder is less for the present year than for 1897 or 1898, showing that little care is exercised at the mines in keeping a record of the powder used.

Number of kegs of powder reported used at mines during 1899, by counties.

Name of County.	No. operating mines reporting.	Tons of coal, (2240 lbs.)	Kegs of powder used.	Tons per kegs used.	Cost per keg to miner.
Barbour	3	63,275	655	96	1.75
Brooke	3	65,176	1,195	52	1.18
* Hancock					1.50
Harrison	3	110,858	958	115	1.71
Marion	2	267,138	3,200	83	1.76
Marshall	2	116,218	2,172	53	1.70
Mineral	3	155,816	828	188	1.75
Monongalia	2	56,793	585	97	1.75
Ohio	3	103,621	381	276	1.45
Preston	1	250,173	2,140	116	1.53
Taylor	2	201,553	1,641	122	1.50
Tucker	3	151,601	2,121	62	2.00
Kanawha	26	791,199	9,193	83	1.95
Mason	5	90,869	1,700	53	2.00
Putnam	2	161,001	2,310	70	2.00
Fayette	35	2,160,792	22,477	109	2.04
Nicholas			not reported		
Raleigh	1	93,370	1,200	77	
Mingo	7	311,830	1,737	72	2.00
McDowell	29	3,373,979	38,050	88	2.00
Mercer	8	1,132,705	19,108	59	2.00
Randolph	1	31,975	415	71	1.75
Totals	111	10,027,275	115,732	86	1.88

*No powder reported used.

Average number of tons of coal produced per keg 86

Average price per keg of powder to the miner..... \$1.88

CHAPTER IX.

Improvements 1898-99 by counties.

County.	Fans.	Furnaces.	Boilers.	Steam locomotives.	Electric locomotives.	Electric generators.	Power house.	Coke ovens	Pumps.	Ten'ments.	Tipples.	Additional openings.	Mining machines	Kind of machines and makers.	Bins.	Elevators.
Barbour											1	1	1			
Hancock												1	1			
Harrison									2	36	1	1		Morgan & Gardner.		
Marion			2					1								
Marshall				1			1		3							
Ohio			1						1							
Preston		1								10		1			1	
Taylor	2							65		3						
Tucker	3	3	1	1	1	1	2				1	2		Elec.		
Kanawha																
Putnam	1			1		1		154		66	4	5	4	Elec. MING		
Wayne																
Mingo			1					28		30	3	1			2	1
McDowell	1			2	1						1	1				
Mercer			1				1									
Totals	10	4	6	6	1	3	4	247	6	196	11	14	7	Elec.	3	1

Tail rope haulage

CHAPTER X.

STRIKES.

The strikes at the mines in the State during the year were unimportant, there being but seven, 432 men were idle—175 for 12 days; 43 for 15 days; 70 for 23 days; 91 for 48 days and 53 for a time not stated.

The following table gives the strikes in detail.

Few years of late have experienced so little labor trouble as has the past year.

INSPECTOR OF MINES.

Strikes at coal mines during the year ending June 30, 1899.

County.	Name of mine.	Date of beginning.	Date of termination.	Days idle.	Men affected.	Total days lost.	Cause of strike.	How settled.	Remarks.
Hancock	Marquet.	June 6	June 29	23	70	1,610	For advance in mining rate.	Advance of 2c per ton and 2 week's pay.	No. men out, not reported.
Marshall	Benwood.	Jan'y. 20	Feb. 4	15	13	615	By discharge of two miners. Miners ask advance of 5c per ton.	Men going to work without re-instatement of those discharged.	Date settled; no. men out; days.
Monongia.	Opeckiska	June 13			53		Discharge of one man for loading copper stem.	Settled at 2½c advance.	Now w/kg non-union men without friction of any kind"
Ohio	Richland.								
Preston	Tunnelton.	April 22	May 4	12	175	2,100	Wanted increase in wages.	Men got'r back at same wages.	Men got'r back at same wages.
Kanawha.	Monarch Kanawha gas seam.	Aug. 5					Drivers, few outside laborers	with 2 wk's pay da. inst'd mo. increased driver's wages 10c on day	Got men in outside laborer's places
Kanawha.		Sept. 1	Oct. 18	48	91	1,308	Question of average wt. of mine cars.	Compromised	
					422	8,723			

CHAPTER XI.

EXPLOSIONS OF GAS AND POWDER.

Four deaths occurred during the year, the result of powder explosions, one in Fayette and three in McDowell county. No fatalities resulted from gas explosions within the State.

Of the non-fatal accidents resulting from explosions five were the result of gas; seven the result of powder and two the result of dynamite explosions.

Below is a summary of the explosions at the mines during the year. For details see chapter XIV on accidents

Explosions.

Fatal 1898-99.

County.	Name of mine.	Name of company.	Name of person.	Date.	Kind of explosion.
Fayette	Central	Central Coal Co.	Samuel Smith.	Aug. 3, 1898.	Powder exp.
McDowell	Peerless	Peerless C. & C. Co.	T. H. Wood	Sept. 15, 1898.	Powder "
"	Peerless	Peerless C. & C. Co.	Hayburn Ramsy	Sept. 15, 1898.	Powder "
"	Tidewater	Tidewater C. & C. Co.	Edward Clark.	Mar. 18, 1899.	Powder "

Non-fatal, 1898-99.

Ohio	E. Grove Shaft	Elm Grove Coal Co	Frank Sisco	Oct. 10, 1898.	Gas exp.
"	E. Grove Shaft	Elm Grove Coal Co	Joe Sasasah.	Oct. 10, 1898.	Gas "
Marshall	Benwood	Wheeling S. & I Co	John Bohill	July 25, 1898.	Gas "
Fayette	Central	Central C. Co.	Arthur Long	Aug. 3, 1898.	Powder exp.
"	Rush Run	Rush Run C & C Co	Samuel Boyd	Aug. 22, 1898.	Gas "
"	Brooklyn	Brooklyn C. Co.	John Aliff	Nov. 16, 1898.	Powder "
"	Sun	Sun C. & C. Co.	Thomas Price	Nov. 26, 1898.	Gas "
Mingo	Thacker	Thacker C. & C. Co	W. L. Robinson	Mar. 23, 1899.	Dynamite "
McDowell	Shawnee	Shawnee C. & C Co	John Clark	Oct. 10, 1898.	Dynamite "
"	Norfolk	Norfolk C. & C. Co	Pink Hinsley.	Feb. 7, 1899.	Powder "
"	Greenbrier	Greenbrier C & C Co	Eli Becher	June 7, 1899.	Powder "
Mercer	Louisville	Louisville C & C Co	Robert Taylor.	Aug. 1st 1898.	Powder "
"	Coaldale	Coaldale C & C Co	Floyd Walker	Oct. 21, 1898.	Powder "
"	Coaldale	Coaldale C & C Co	James F. Smith.	Oct. 21, 1898.	Powder "

CHAPTER XII.

Men Employed and Days Worked.

County.	No of mines.	Coke plants.	Days mines worked.	Days ovens worked.	Men employed.						Total No. men employed.
					Pick miners.	Machine miners.	Machine runners & helpers.	Others inside of mine.	Outside day hands.	On coke ovens.	
Barbour.....	3	1	219	225	60	..	2	12	13	3	90
Brooke.....	3	..	290	..	98	..	..	9	12	..	119
Hancock.....	3	..	250	..	41	..	..	8	8	..	57
Harrison.....	11	1	223	300	151	..	..	64	67	5	590
Marion.....	17	10	281	258	1478	275	19	311	230	202	2215
Marshall.....	4	..	299	..	151	72	12	38	31	..	310
Mineral.....	6	..	292	..	127	..	..	12	35	..	501
Monongalia.....	2	2	283	55	65	..	..	11	7	13	96
Ohio.....	3	..	257	..	126	..	..	21	12	..	159
Preston.....	3	2	320	277	290	..	..	17	26	30	393
Taylor.....	3	..	160	..	351	..	..	28	37	..	416
Tucker.....	8	6	269	211	873	27	1	232	56	277	1469
Kanawha.....	47	2	110	120	1751	308	67	112	332	35	2635
Mason.....	2	..	233	..	150	..	..	32	29	..	211
Putnam.....	5	..	212	..	317	..	..	50	122	..	489
Fayette.....	80	26	211	295	1384	269	79	1197	687	438	7051
Nicholas.....	1	..	10	..	..	12	6	5	8	..	31
Raleigh.....	1	1	211	365	95	..	..	20	20	15	150
Mingo.....	11	..	251	..	352	52	12	132	69	..	617
McDowell.....	32	29	233	295	1925	108	36	838	377	1398	4542
Mercer.....	10	8	301	301	998	200	18	333	241	687	2510
Randolph.....	1	..	300	..	30	..	..	5	6	..	41
Totals.....	267	88 avg.	240 avg.	272	11,119	1,523	285	3,907	2,161	3,013	25,108

Summary of the number of men employed, days worked, kinds of ventilation etc., by counties for the year ending
June 30, 1899.

County.	No. mines operated.	No. pick miners employed.	No. machine miners and runners.	Other inside employes.	No. coke employes.	Other outside employes.	Total inside employes.	Total outside employes.	Total No. men employed.	No coke plants operated.	No. of fans.	No. of furnaces.	No. of natural ventilations.	No. ventilations by steam jet, fire basket.
Barbour	3	60	2	12	3	13	74	16	90	1		3		
Brooke	3	98		9		12	107	12	119					
Hancock	3	41		2		67	40	8	57					
Harrison	11	131		61	5	67	318	72	530	1		3		1
Marion	17	178	824	311	202	230	1813	352	2215	10		13		5
Marshall	4	151	84	38		31	276	31	310			2		
Mineral	6	127		12		35	439	33	504					
Monongalia	6	65		11	13	7	76	20	96	2			1	
Ohio	2	196		21		12	147	12	159					
Preston	2	260		17	30	26	327	76	423	2		1		
Taylor	2	354		28		37	379	37	416					
Tucker	8	873	31	292	277	27	1730	255	1985	6		5		1
Washington	1	30		5		6	31	6	37					
Kandolph	47	1751	375	412	35	302	2558	287	2845	2		14		
Kanawha	1	150		32		29	182	29	211					
Mason	5	317		50		132	307	122	429			2		
Putnam	50	4881	318	1197	438	687	5099	1125	7024	26		27		24
Fayette	1	55	18	5		8	23	25	31					
Nichols	1	95		20	15	20	118	25	150	1				
Minigo	11	352	64	132		69	518	69	617			1		
McDowell	32	1925	141	132	1308	377	2907	1685	4592	29		3		
Mercer	10	908	218	363	687	214	1609	921	2510	8				1
Totals	267	14,119	1,608	3,907	3,013	2,461	19,431	5,474	25,108	5	110	73	64	3

BARBOUR COUNTY.

Name of mine.	Name of company.	Employees.						No. days the mines operated.	No. days the ovens operated.	Avg. No. ovens op- erated.	No. mules and horses inside.
		Inside.			Outside.						
		Miners.	Laborers.	Total.	laborers.	Coke workers.	Total.				
Junior	Junior Coal Co.	60	8	68	7	3	10	225	225	10	7
Kelley's mines	Philippi Coal Co.		6	6	1		1	180			5
South Arden	South Arden Coal Co.				2		2				2
	Totals	60	14	74	13	3	16				14
BROOKE COUNTY.											
Blanche	Panhandle Coal Co.	50	3	53	3		3	313			4
Gilechrist	Gilechrist Coal Co.	32	3	35	6		6	252			3
Wellsburg	J. W. M. Carmichael ..	16	3	19	3		3	306			3
	Totals	98	9	107	12		12				10
HANCOCK COUNTY.											
Marquet	Marquet Coal Co.	35	8	43	7		7	250			7
	M'Elfresh Fire Clay Co.	6		6	1		1				1
	Totals	41	8	49	8		8				8
HARRISON COUNTY.											
Bingamon	Bingamon C. & C. Co.	30	6	36	1		1				3
Worthington No. 2	Worthington C. & C. Co.	10		10	1		1	313			7
Fall Run No. 2	Pinnickinnick C. Co.	65	8	73	12		12	196			8
Jackson No. 1	Pinnickinnick C. Co.	75	5	80	10		10	257			15
Briar Hill No. 3	Briar Hill C. & C. Co.	50	8	58	10		10	160			7
Briar Hill No. 1	Briar Hill C. & C. Co.	10	8	18	8	5	13	300	300	20	7
Glen Falls	Glen Falls C. & C. Co.	10	8	18	5		5	170			5
Howard	Howard C. & C. Co.	63	9	72	7		7	235			5
Despard No. 2	Despard Gas Coal Co.	25	9	34	1		1	166			8
Mt. Clare	Mt. Clare C. & C. Co.	20	1	21	2		2	365			2
	Findlay & Co.	6	2	8	1		1	60			1
	Totals	454	64	518	67	5	72				68

MARION COUNTY.

Name of Mine.	Name of Company.	Employees.									
		Inside.			Outside.						
		Miners.	Laborers.	Total.	Laborers.	Coke workers.	Total.	No. of days mines operated.	No days the ovens operated.	Avg. No. of ovens operated.	No mules and horses inside.
New England ..	W. Fairmont C. & C. Co	227	80	307	16	23	60	311	365	50	27
W. Fairmont Shaft	W. Fairmont C. & C. Co	111	35	176	29	8	37	311	100	9	19
Gaston	Gaston Gas Coal Co	176	22	198	23	25	48	280	160	60	40
Montana	Montana C. & C. Co	165	55	220	21	30	51	300	300	100	18
	Mason C. & C. Co	40	10	50	4	12	16	313	313	50	6
Briar Hill No. 2 ..	Briar Hill C. & C. Co	75	15	90	10	10	20	300	60	30	12
King	Va. & Pittsburg C. & C. Co	42	6	48	7	12	19	228	217	40	5
No. 2	Monongah C. & C. Co	187	65	252	36	31	70	260	270	120	22
No. 3	Monongah C. & C. Co	170	14	214	33	28	61	260	270	80	19
P. & A. Mine	Clark C. & C. Co	60	9	69	6		6	200			7
Chiefton	J. A. Clark C. & C. Co	70	15	85	10		10	200			12
	Worthington C. & C. Co	70		70	20	20	20	313	313	40	12
	Highland C. & C. Co	30	4	34	2		2	125			2
Total		1453	360	1813	230	202	432				201
MARSHALL COUNTY.											
	Boggs Run M. & Mfg Co	36	10	46	6		6	250			5
Benwood	Wheeling S. & I. Co	25		25	7		7	284			8
Glendale	Glendale Coal Co	85	28	113	10		10	365			9
Moundsville	Moundsville C. Co	80	12	92	11		11	250			9
Total		226	50	276	34		34				31
MINERAL COUNTY.											
Hampshire	Davis C. & C. Co	50	6	56	4		4	301			4
Savage	Davis C. & C. Co	85	8	93	5		5	309			5
Tyson Gas Coal ..	Davis C. & C. Co	60	5	65	6		6	307			4
Windom's B. V. Mine	Davis C. & C. Co	12	3	15	4		4	307			3
Elk Garden	W. Va. C. & P. R. R. Co	220	20	240	16		16	280			37
Total		427	12	469	35		35				53

Monongalia County.

Name of Mine.	Name of Company.	Employees.						No. days mine was operated.	No. days ovens operated.	Avg. no. ovens operated.	No. mules & horses inside.
		Inside.			Outside.						
		Mines.	Laborers.	Total.	Laborers.	Coke Workers.	Total.				
Opekiska	Opekiska C. & C. Co.	30	5	35	1	4	8	250	150	20	4
Beechwood	Pat's'n-Res. C. & C. Co.	35	6	41	3	9	12	115	11	30	4
	Total	65	11	76	7	13	20	.....	.....	.....	8

OHIO COUNTY.

Manchester & W.	T. E. Kasley & Son.	15	4	19	2	...	2	250	...	...	5
Richland	Richland Coal Works	15	9	51	3	...	3	198	...	...	5
Yochum	Yochum C. Co.	6	1	7	2	...	2	313	...	...	1
.....	Elm Grove C. Co.	60	7	67	5	...	5	300	...	...	3
	Total	126	21	147	12	...	12	...	...	...	14

PRESTON COUNTY.

Austin	Austin Coke Works ..	40	15	55	6	25	31	300	313	82	7
West End Mine ..	O. N. Orr C. & C. Co.	30	4	34	3	...	3	290	...	...	5
Tunnelton	Merchants C. Co.	150	15	165	10	...	10	313	...	...	12
Irona	F. C. Todd, Esq.	55	7	62	5	...	5	...	...	...	7
.....	Oakland C. & C. Co.	15	6	21	2	5	7	250	100	20	5
	Totals	290	47	337	26	30	56	...	...	...	36

TAYLOR COUNTY.

Tyrconnell	Grafton C. & C. Co.	66	7	73	8	...	8	192	...	...	8
Sandlich	Grafton C. & C. Co.	25	1	29	5	...	5	35	...	...	5
.....	Flemington C. & C. Co.	150	...	150	...	...	...	230	...	...	16
Tyrconnell	J. H. Henry Esq. Lessor	50	9	59	12	...	12	100	...	...	8
Simpson	New York C. & C. Co.	60	8	68	12	...	12	106	...	...	5
	Total	351	28	379	37	...	37	...	...	...	12

Tucker County.

Name of Mine.	Name of Company.	Employees.							No. days mine was operated.	No. days ovens operated.	Avr. No. ovens operated.	No. horses, & mules inside.
		Inside.			Outside.							
		Miners.	Laborers.	Total.	Laborers	Coke Workers.	Total	.....			
Douglas	Cumberland C. Co..	115	45	160	20	50	70	313	313	120	20	
Thomas Shaft	Davis C. & C. Co	100	39	139	5	11	19	252	286	40	19	
Thomas Drift	Davis C. & C. Co	400	27	427	14	6	20	255	300	22	17	
Coketon No. 1.	Davis C. & C. Co	33	19	42	1		1	280			3	
Coketon No. 2	Davis C. & C. Co	122	40	162	10	95	105	280	155	198	19	
Coketon No. 3	Davis C. & C. Co	110	66	206	6	112	118	310	255	242	18	
Total.....		900	236	1136	56	277	333	.....	.....	.....	96

KANAWILA COUNTY.

	John B. Carson, Esq.	20	5	25	10					1
Falling Rock.....	Falling Rock C. C. Co.	20	5	25	10		10	312		3
Graham	T. J. Mason.	25	3	28				225		3
New Mine.....	Campbell's Creek C Co	110	33	173	32		32	203		32
Spring Fork.....	Campbell's Creek C Co	72	45	117	27		27	203		41
Black Diamond	Black Diamond M. Co	35	5	40	6		6			4
Quincy	Quincy C. Co	12	2	14	2		2	303		2
Peabody	Peabody C. Co.	60	12	72	18		18	144		10
	Victor C. Co	45	10	55	8		8	60		5
Virginia	Virginia Mining Co....	40	10	50	4		4	261		4
Big Mountain.....	Big Mountain M. Co.	70	14	84	8		8	283		7
B. No 4	Kelley's Creek M. Co.	51	17	68	7		7	180		9
D. No. 4. D. No. 2.	Kelley's Creek M. Co.	20	8	28	3		3	60		3
C. No. 2. C. No. 3.	Kelly's Creek M. Co..	65	6	71	22		22	180		10
A.....	Kelly's Creek M. Co.									
Riverside	Riverside C. Co.	90	25	115	4		4	273		9
Cannelton Cannel	Cannelton C. Co.	70	9	79	5		5	27		7
Kanawha Gas.....	Cannelton C. Co.	100	20	120	8	35	13	233	120	15
Chalmore.....	Chalmore Coal Co	46	6	52	4		4	200		3
Brathin.....	Brathin C. Co.	12	3	15	2		2	150		2
Atherton	Big Black Band Co	40	10	50	8		8	150		

Kanawha County.

Name of Mine.	Name of Company.	Employees.						No. days mine operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules & horses inside.
		Inside.			Outside.						
		Miners.	Laborers.	Total.	Laborers.	Coke Workers.	Total.				
Len's Creek	Len's Creek C. & C. Co.	55	5	60	7	...	7	175	.....	.....	1
North & South	R. B. Cassidy	280	61	341	10	...	10	200	.....	.....	60
Ronda	Coalburg Colliery Co.	75	10	85	10	...	10	166	.....	.....	8
Keystone	Stevens C. Co.	52	21	73	23	...	23	161	.....	.....	7
Aemie	Stevens C. Co.	31	23	54	32	...	32	182	.....	.....	11
Coalburg	Robinson C. Co.	75	13	88	8	...	8	214	.....	.....	17
Cedar Grove	Robinson C. Co.	15	2	17	...	...	...	249	.....	.....	2
Chestnut Point	Brannon Coal Co.	20	8	28	2	...	2	100	.....	.....	6
Black Cat	The Kan. Splint C. Co.	60	15	75	6	...	6	200	.....	.....	6
Belmont	Belmont C. Co.	90	20	110	15	...	15	140	.....	.....	15
Kanawha Seam .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crown Hill	Polme C. Co.	25	1	26	5	...	5	.....	.....	.....	5
Chesapeake	Chesapeake Mining Co.	149	10	159	35	...	35	200	.....	.....	33
Consolidated	Montgomery C. Co.	40	10	50	7	...	7	166	.....	.....	11
Mt. Morris	Montgomery C. Co.	36	4	40	8	...	8	157	.....	.....	7
Total		2059	479	2539	362	35	397	.....	.....	.....	368

MASON COUNTY.

Camden	Camden Clay Co.	8	2	10	...	...	...	225	.....	.....	2
Beech Grove	Beech Grove C. Co. ....	...	3	3	5	...	5	243	.....	.....	3
Hope Co.	Hope Salt & C. Co.	18	5	23	1	...	1	275	.....	.....	7
.....	Mason City Mining Co.	12	2	14	3	...	3	500	.....	.....	2
Liverpool	Liverpool Salt & C. Co.	18	2	20	2	...	2	216	.....	.....	1
.....	Hartford Salt & C. Co.	19	7	27	3	...	3	202	.....	.....	6
New Haven	Consumers C. & M. Co.	75	10	85	15	...	15	221	.....	.....	8
Total		150	32	182	29	...	29	.....	.....	.....	29

PUTNAM COUNTY.

Plymouth	Carver C. Co.	112	28	140	22	...	22	272	.....	.....	14
Florence	Marmet-Smith C. & M. Co.	175	22	197	100	...	100	223	.....	.....	40
Total		317	50	367	122	...	122	.....	.....	.....	54

Fayette County.

Name of Mine.	Name of Company.	Employees.						No. days mine operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules & horses inside.
		Inside.			Outside.						
		Miners.	Laborers.	Total.	Laborers.	Coke Workers.	Total.				
	Longacre Colliery Co	40	34	74	16	10	26	290	313	20	8
Block or No. 5	W. R. Johnson & Co	15	5	20	4	...	4	...	...	...	6
No. 2 or Gas Seam	W. R. Johnson & Co	6	1	7	3	...	3	...	...	...	1
Boomer	Boomer C. & C. Co	56	29	85	16	...	16	218	...	...	10
Eureka	M. T. Davis & Co	35	15	50	8	...	8	263	...	...	8
No. 5 Block	M. T. Davis & Co	25	28	53	9	...	9	185	...	...	12
Mecca	Mecca C. & C. Co	75	15	90	15	...	15	211	...	...	16
Straughan Mine	Coal Valley M. Co.	25	1	29	2	...	2	16	...	...	4
Eagle	Carver Brothers	35	10	45	7	27	34	285	...	54	10
Nos. 1 & 2 Edg'wtr	Carver Brothers	75	16	91	10	...	10	200	...	...	18
No. 5 Edgewater	Carver Brothers	50	15	65	5	...	5	200	...	...	13
No. 2	The St. Clair Co.	40	20	60	5	...	5	150	...	...	12
No. 1	The St. Clair Co	45	22	67	1	15	19	...	300	75	8
Forrest Hills	Vance C. Co. Davis, rec.	35	11	49	6	...	6	170	...	...	9
Diamond	Diamond C. Co	80	15	95	10	...	10	223	...	...	9
No. 2 Seam, Gas	W. R. Johnson	40	18	58	12	25	37	244	302	...	10
No. 5	W. R. Johnson	65	20	85	15	...	15	163	...	...	18
No. 1	W. R. Johnson	10	12	22	2	...	2	96	...	...	3
Excelsior	Mt. Carbon Co. Ltd	8	2	10	1	...	1	...	...	...	2
Vulcan	Mt. Carbon Co. Ltd	...	2	2	16	...	16	...	312	189	31
No. 1 (Gas)	Gt. Kanawha Col. Co.	66	30	96	10	25	35	293	...	66	...
Digsby	Gt. Kanawha Col. Co.	25	15	40	5	...	5	231	...	...	8
Ganley Mountain	Ganley M't'n C. Co	300	95	395	65	60	125	310	310	102	43
Gaymont	Deitz-M't's'n C&C Co	70	...	70	5	8	13	225	225	24	12

Fayette County.

Name of Mine.	Name of Company.	Employees.						No. days mines op- erated.	No. days ovens op- erated.	Aver. No. ovens op- erated.	No. mules & horses inside.
		Inside.			Outside.						
		Miners.	Laborers.	Total.	Laborers.	Coke workers.	Total.				
Sunnyside	Sunnyside C. & C. Co.	30	9	39	3	9	12	80	100	18	8
Elmo	New River M. C.	30	7	37	3		3				5
Masterson	Masterson C. Co.	25	1	26	3		3	50			3
Fayette	Fayette C. & C. Co.	50	12	62	9	5	14	265	365	12	17
Nuttallburg	Nuttallburg C. & C. Co.	65	20	85	10	18	28	220	300	60	28
Keeney's Creek	Nuttallburg C. & C. Co.	40	15	55	5		5	150			10
Brown	Brown C. Co.	77	17	94	8		8				12
	Broone C. & C. Co.	75	7	82	4		4	57½			9
Ballinger No. 2.	Ballinger C. Co.	36	6	42	3		3	187			1
Ballinger No. 1.	Ballinger C. Co.	70	10	80	7		7	185			6
Blume	Blume C. & C. Co.	65	8	73	11		11	175			8
Smokeless.	Smokeless C. & C. Co.	50	12	62	6		6	162			7
Dubree	Rothwell C. & C. Co.	25	3	28				192			3
Quarrier	Rothwell C. & C. Co.	40	6	46	7		7	187½			6
	South Caperton M. Co.	55	6	61	3		3				
South Side	New River Coke Co. ..	105	15	120	12		12	210			10
North Side	New River Coke Co. ..	60	10	70	5	35	40	230	300	125	12
	Longdale Iron Co.	85	21	106	10	35	45				10
Cunard	Cunard Coal Co.	33	20	53	7		7	135 2-5			5
Brooklyn	Brooklyn C. Co.	36	17	53	10		10	186			14
Fire Creek	Fire Creek C. & C. Co.	100	15	115	10	30	40	238½	290	90	
Central	Central C. Co.	70	25	95	6	12	18	220	290	50	5
	Echo C. & C. Co.	120	15	135				225	313	45	10
Red Ash	Red Ash C. Co.	78	11	119	15	32	47	210	300	80	7
Rush Run	Rush Run C. & C. Co.	82	35	117	18		18	166			8
Thurmond	The Thurmond C. Co.	125	17	142	9		9	238			10
Stone Cliff	Emery C. & C. Co.	77	29	106	10	10	20	210	310	45	
Dimmock	Dimmock C. & C. Co.	45	50	95	10		10	156			8
B'ch'w'd & K'yst'n ..	Beechwood C. & C. Co.	125	25	150	20	5	25	150	250	20	9

Fayette County.

Name of Mine.	Name of Company	Employees.						No. days mine was operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules & horses inside.
		Inside.			Outside.						
		Mines.	Laborers.	Total.	Laborers.	Coke Workers.	Total.				
Alaska	Alaska C. & C. Co.	90	20	110	10	2	12	165	365	18	18
Slater	Slater Coal Co.	40	5	45	5	...	5	225	...	...	4
Haney No.1& No.2	Haney C. & C. Co.	95	25	120	16	...	16	260	...	...	11
Star	The Star C. & C. Co.	100	20	120	15	...	15	181½	...	...	15
Collins No.1 & No.2	Collins Colliery Co.	175	100	275	20	50	70	225	300	100	32
Sun	Sun C. & C. Co.	150	25	175	10	...	10	202	...	...	16
Turkey Knob.	Dunloop C. & C. Co.	113	...	113	30	...	30	160	...	...	30
Macdonald	Turkey Knob C. Co.	100	30	130	10	...	10	200	...	...	22
Sugar Creek.	The Macdonald Col Co.	160	40	200	25	...	25	...	...	...	24
Old Mine	Sugar Creek C. & C Co.	80	25	105	25	...	25	205	...	...	10
Big I. V. No 3.	Quinnimont C. Co. ....	...	...	...	...	...	...	...	...	...	...
Robins	Quinnimont C. Co.	140	22	162	20	25	45	313	313	90	...
Laurel Creek C. Co.	The Robins C. Co.	50	5	55	6	...	6	165	...	...	11
Greenwood.	Laurel Creek C. Co.	70	10	80	2	...	2	200	...	...	10
	Greenwood C. Co.	175	35	210	15	...	15	209	...	...	25
	Total.	4653	1276	5929	687	438	1125	...	...	...	...
NICHOLAS COUNTY.											
Greendale.	Greendale C. & C. Co.	12	11	23	8	...	8	20	...	...	1
	Total.	12	11	23	8	...	8	...	...	...	1
RALPHIGH COUNTY.											
Royal	Royal C. & C. Co.	95	20	115	20	15	35	214	365	78	16
	Total.	95	20	115	20	15	35	...	...	...	16
MINGO COUNTY.											
Freeport.	Camp Branch C. & C Co.	60	6	66	4	...	4	235	...	...	6
Logan	Van Kirk C. & M. Co.	25	2	27	2	...	2	...	...	...	3
Maritime C. Co.	Logan Con. C. Co.	74	74	148	16	...	16	302	...	...	13
Thacker.	Maritime C. Co. ....	...	...	...	...	...	...	...	...	...	...
	Thacker C. & C.Co.	100	36	136	25	...	25	260	...	...	13
	Mingo C. & C. Co.	30	6	36	4	...	4	160	...	...	4

Mingo County.

Name of Mine.	Name of Company.	Employees.						No. days mine was operated.	No. days ovens operated.	Avg. No. ovens operated.	No mules & horses inside.
		Inside.			Outside.						
		Mines.	Laborers.	Total.	Laborers.	Coke Workers.	Total.				
Lynn	Lynn C. & C. Co.	10	6	46	5	...	5	125	...	...	6
.....	Dingess C. Co. ....	...	...	...	...	...	...	...	...	...	...
Grapevine	Grapevine C. Co.	40	8	48	7	...	7	268	...	...	4
Lick Fork	Lick Fork C. & C. Co.	35	6	41	6	...	6	...	...	...	4
Total		104	14	518	69	...	69	...	...	...	53

McDOWELL COUNTY.

	Davy Coal Co.	6	3	9							
Tidewater	Tidewater C. & C. Co.	50	15	65	8	25	33	300	300	50	8
Bottom Creek	Bottom Creek C. & C. Co.	58	20	78	12	24	36	211	270	58	9
Peerless	Peerless C. & C. Co.	76	38	114	9	38	47	202	260	60	7
Empire	Empire C. & C. Co.	40	15	55	10	10	50	249	313	80	5
Shawnee	Shawnee C. & C. Co.	60	20	80	10	30	40	190	280	90	10
Eureka	Eureka C. & C. Co.	75	35	110	15	50	65	192	313	80	11
Pulaski	Pulaski Iron Co.	65	16	111	10	65	75	275	300	150	10
Keystone	Keystone C. & C. Co.	60		60	15	15	30	210	285	50	10
	Algoma C. & C. Co.	114	63	177	28	97	125	291	301	175	20
	Gilliam C. & C. Co.	60	15	75	10	25	35	216	216	65	10
Rolfe	Rolfe C. & C. Co.	55	20	75	10	35	45	233	288	60	11
Roanoke	Roanoke C. & C. Co.	50	15	65	8	25	33	195	365	60	10
Indian Ridge	Indian Ridge C. & C. Co.	35	15	50	7	25	32	235	175	65	13
Arlington	Arlington C. & C. Co.	50	15	65	7	20	27	276	276	65	11
Greenbrier	Greenbrier C. & C. Co.	60	20	80	10	25	35	190	310	70	11
McDowell	McDowell C. & C. Co.	45	11	59	12	40	52			66	10
Ashland	Ashland C. & C. Co.	45	25	70	18	40	58	240	305	65	10
	Elk Ridge C. & C. Co.	65	20	85	10	30	40	191	298	70	7
Lynchburg Colly	Lynchburg C. & C. Co.	85	35	120	15	50	65	205		85	11
Powhatan	Powhatan C. & C. Co.	80	25	105	20	75	95		313	128	13
Upland No. 1 & No. 2	Upland C. & C. Co.	95	24	119	11	50	61	330	210	125	13
Houston	Houston C. & C. Co.	75	100	175	16	112	128	272	313	150	11

McDowell County.

Name of Mine.	Name of Company.	Employees.						No. days mine op- erated	No. days ovens op- erated.	Avg. No. ovens op- erated.	No. mules & horses inside.
		Inside.			Outside.						
		Miners.	Laborers.	Total.	Laborers.	Coke workers.	Total.				
No. 1 and No. 2.	Croger C. & C. Co.	140	66	206	20	125	145	250	250	250	22
Turkey Gap.	Turkey Gap C. & C. Co	150	75	225	25	100	125	210	365	200	17
Norfolk Colliery	Norfolk C. & C. Co	71	43	114	17	32	49	270	270	110	10
Lick Branch Colly	Norfolk C. & C. Co	60	15	75	10	15	55	270	270	120	7
Angle Colliery	Norfolk C. & C. Co	25	7	32	4	6	10	270	270	32	7
Shamokin	Shamokin C. & C. Co	80	35	115	15	24	39	270	365	100	12
Elkhorn.	Elkhorn C. & C. Co	100	35	135	15	10	55	213½	311	150	12
Total.		2023	871	2907	377	1308	1685				321

MERCER COUNTY.

Sterling E. and W.	Mill Creek C. & C. Co.	75	30	105	50	100	150	363	365	135	13
	Coaldale C. & C. Co.	75	85	160	10		10	365	365	75	11
Klondike C. Co.	Klondike C. & C. Co.	7	2	9				200			1
Buckeye.	Buckeye C. & C. Co.	65	20	85	10	30	10	250	250	50	9
Caswell.	Caswell Crk C. & C. Co.	155	52	207	55	58	113	270	240	50	16
Booth-Bowen	Booth-Bowen C. & C. Co.	126	29	155	24	39	63	237	237	75	27
Louisville	Louisville C. & C. Co.	50	30	80	10	40	50	305	305	75	14
Goodwill Colliery	Goodwill C. & C. Co.	45	25	70	10	20	30	170	170	45	15
E. & W. Mines.	South W. Va. Imp. Co.	600	138	738	75	100	475	320	320	350	60
Total.		1198	411	1609	214	687	931				169

RANDOLPH COUNTY.

Randolph Coal	R. P. Rease Supt. Randolph Coal	30	5	35	6		6				3
Total.		30	5	35	6		6				3

CHAPTER XIII.

Steam Boilers at Coal Mines, 1898-99.

COUNTY.	No. of mines having boilers.	No. of Boilers.	No. insured.	No. not insured.	Acres coal worked out.
Barbour	1	2	...	2	4 18
Brooke .....	...	...	...	...	14 05
Hancock	1	1	...	1	6 5
Harrison	4	5	3	2	46 30
Marion	12	42	39	3	255 17
Marshall	3	8	7	1	31 5
Mineral	3	4	...	4	44 0
Monongalia .....	...	...	...	...	5 9
Ohio	2	3	...	3	18 92
Preston	2	3	...	3	48 38
Randolph .....	...	...	...	...	2 9
Taylor	1	1	...	1	28 48
Tucker	5	17	17	...	99 00
Kanawha	14	25	8	17	250 53
Mason	4	6	...	6	18 64
Putnam	2	5	...	5	21 2
Fayette	36	71	48	23	784 89
Raleigh	1	2	2	...	26 2
Mingo	3	4	...	4	53 35
McDowell	30	83	51	29	418 00
Mercer	8	31	12	19	177 1
Totals	132	313	190	123	2,361 19

CHAPTER XIV.

ACCIDENTS.

Eighty-nine persons were killed at the mines during the year, 79 inside and 10 outside of the mines. One hundred and ninety-three were non-fatally injured, 165 within and 28 without the mines. Of the 89 fatal accidents, 64 were the result of falls of the roof; 13 the result of mine cars, 4 by powder explosions and 2 by electricity. Of the 193 non-fatal accidents, 128 were the results of falls of the roof; 41 the result of mine cars; 10 the result of powder and 4 the result of gas explosions.

Of the total accidents it is found that falls of the roof were the cause of 64.5 per cent, mine cars 19.4 per cent, powder explosions 4.7 per cent and gas explosions 1.1 per cent.

A new source of danger to the employes in the mines is the presence of electrical wires having a high voltage and a corresponding potential.

Wires carrying alternating current of 550 to 600 volts have been the cause of two fatal accidents in Tucker county.

In the Counties wherein the mines have treacherous roof, notably in Fayette, Tucker, McDowell and Mercer, are employed many unskilled miners who know not the dangers met in a mine. Many of these men are the victims of accidents from falls of roof.

Of the nationalities which seem to exercise the least care of themselves within a mine comes, first the Americans, second the negro. The foreign elements seem to exercise the greatest care to guard against accidents, as may be learned from the tables given below.

The greatest number of accidents occur to those who are 20 to 25 years old.

A table is submitted giving the years of experience of all persons killed and injured during the year.

1898-99.

Table exhibiting the causes of fatal and non-fatal accidents and the number and percentage by each cause.

CAUSES.	Fatal.	Non-fatal	Total.	Percentage.
Falls of roof slate.....	47	70	117	41.57
Falls of top coal.....	16	63	59	20.78
Falls of slate and coal.....	1	5	6	2.15
Injured by mine cars.....	13	11	54	19.35
Powder explosions.....	1	19	13	4.65
Fell from scaffold.....	1	1	1	.35
Horses and mules.....	1	2	2	.70
Mine locomotives.....	1	1	2	.70
Gas explosions.....	1	4	4	1.07
Elevators.....	1	2	3	1.07
Electricity.....	2	1	2	.70
Mine machine.....	1	4	4	1.43
Fall of mine timber.....	1	4	4	1.43
Fall of roof.....	1	4	4	1.43
Fell from tippie.....	1	1	2	.70
Slack bin.....	1	1	1	.35
Fell from tram road.....	1	1	1	.35
Burned by oil.....	1	1	1	.35
Injured at drum house.....	1	1	1	.35
Total.....	89	193	282	100.

Accidents tabulated according to the days of the week on which they occurred.

1898-99.

Fatal Accidents.

	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Total.
Inside.....	4	15	16	13	12	6	13	79
Outside.....	1	5	1	2	1	1	1	10
Totals.....	4	20	17	15	12	7	14	89

Non-Fatal Accidents.

	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Total.
Inside.....	3	27	37	21	20	29	28	165
Outside.....	1	4	5	5	5	5	4	28
Totals.....	3	31	42	26	25	34	32	193

Summary, Fatal and Non-Fatal Accidents.

	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Total.
Inside	7	42	53	34	32	35	41	244
Outside	9	9	6	7	5	6	5	32
Totals	7	51	59	41	37	41	46	282

Nationalities.

	Fatal.	Non-Fatal.
American	48	113
Negro	25	52
Pole	1	6
Hungarian	4	2
Irish	2	2
Italian	1	4
German	2	1
Slav	1	3
English	3	3
Scotch	1	1
Total	87	191

Ages of persons killed or injured.

1898-99.

	Fatal.	Non-Fatal.
11 years	1	2
15 "	1	2
16 "	1	3
17 "	2	6
18 "	3	15
20 "	20	53
20-25 "	18	40
25-30 "	11	17
30-35 "	11	16
35-40 "	6	11
40-45 "	3	9
45-50 "	2	4
50-55 "	2	2
55-60 "	2	2
60-65 "	2	2
Total	79	180

Years of Experience.

1898-99.

	Fatal.	Non-Fatal.
3 mos. or less.....	7	12
3-6 mos.....	4	11
1 year.....	1	7
2 years.....	1	20
3 ".....	2	16
4 ".....	4	10
5 ".....	5	13
6 ".....	6	5
7 ".....	5	6
8 ".....	2	4
9 ".....		
10 ".....	8	16
15 ".....	10	7
20 ".....	1	9
25 ".....	1	3
30 ".....	2	3
Several.....	6	8
Many.....	5	4
Total.....	73	157

Fatal Accidents—1898-99.

No.	County.	Name of Mine	Name of Person Killed.	Date of		Nationality.
				Injury	Death	
1	Harrison	Glen Falls	Robert M. George	Nov. 1	Nov. 1	American
2		Farnum	Peter Gill	Dec. 9	Dec. 9	American
3	Marion	Hughes	Jas. L. Hughes	Aug. 16	Aug. 16	American
4		New England Mine	Charles R. Arnold	Dec. 5	Dec. 5	American
5		Monongah No. 2	Staten A. Barnes	Dec. 6	Dec. 6	American
6		West Fairmount Shaft	George Jack	Jan. 21	Jan. 25	American
7	Mineral	Elk Garden No. 6	William Fant	Mar. 2	Mar. 2	American
8	Monongalia	Beechwood	S. E. McElroy	Nov. 26	Nov. 26	American
9	Marshall	Boggs Run	William Leithe	Sept. 12	Sept. 13	German
10	Tucker	Douglas No. 1	Jas. Dufty	Aug. 21	Aug. 21	American
11		Coketon No. 2	Corisini Ombach	Sept. 5	Sept. 5	Italian
12		Thomas Shaft	John Farley	Sept. 19	Sept. 19	Irish
13		Thomas Shaft	David Brown	Jan. 11	Jan. 11	Colored
14		Thomas Drift	Toney Trump	June 6	June 6	Polish
15		Coketon No. 3	Patrick McVeigh	June 29	June 29	American
16	Taylor	Flemington	John Petzak	June 16	June 16	Slav
17	Kanawha	Kelleys Creek No. 5	Charles Stanley	Oct. 12	Oct. 12	American
18		Blue Hole	Marion Seibey	Feb. 3	Feb. 3	American
19	Putnam	Plymouth	Ben Kelley	Nov. 11	Nov. 11	American
20	Payette	Star	George Daniels	June 27	July 2	Colored
21		Big O	James Jackson	July 1		American
22		Big O	Charles Moss	July 2		American
23		Creecent Gas	Joseph Porter	July 9	July 19	American
24		Sum	John Scott	July 11		Colored
25		Cunard	Englebert Arndt	July 18	July 18	German
26		Collins	James Harvey	July 22	July 28	English
27		Collins	Isaac C. Barrett	July 27		Colored
28		Central	Samuel Smith	Aug. 3		American
29		Turkey Knob	Hill Dawson	Aug. 25		Colored
30		Harvey	Charles Daniels	Sept. 12		American
31		Red Ash	John Richardson	Oct. 5	Oct. 5	Colored
32		Echo No. 2	Robert Thompson	Oct. 22	Oct. 22	American
33		Edgewater	William Mason	Nov. 10		American
34		Rush Run	Silas P. Thompson	Nov. 22		American
35		Greenwood	Luther Miner	Nov. 23	Nov. 23	American
36		Ballenger No. 2	William Watts	Dec. 28	Dec. 28	Colored
37		Sugar Creek	John F. Biggs	Jan. 12	Jan. 12	American
38		Quinnimont	J. W. Nicely	Feb. 6	Feb. 6	American
39		Cliff Top	W. M. Johnson	Feb. 16	Feb. 16	Colored
40		Star	James Parker	Feb. 20	Feb. 20	American
41		Greenwood	George Bland	Mar. 21	Mar. 21	American
42		Greenwood	Broch Cotton	Mar. 21	Mar. 21	American
43		Central	James O'Connors	Apr. 3	Apr. 3	Irish
44		Harvey	J. F. Wallace	Apr. 15	Apr. 15	American
45		Dunloop	Henry A. Comer	Apr. 17	Apr. 17	American
46		Lonsacre	Stephen Huddleston	Apr. 19	Apr. 19	American
47		Collins	Fred Tate	May 9	May 9	Colored
48		Edgewater	Charles Pettigrew	May 10	May 10	American
49		Dunloop No. 2	Lewis C. King	May 22	May 22	American
50		Beechwood	Lee Smoot	May 29	May 29	American
51		Smokeless	Altimore Burgess	June 19	June 21	
52	Mercer	Coaldale	John Jerdan	Sept. 20	Sept. 20	American
53		Coaldale	Albert Preston	Sept. 20	Sept. 20	American
54		Klondike	John S. Collins	Feb. 1	Feb. 1	American
55		Klondike	John F. Ratcliffe	Apr. 3	Apr. 3	Colored
56		Louisville	J. W. Graves	Apr. 19	Apr. 19	American
57		Louisville	Alex. Naggie	June 20	June 20	Hungarian
58		Buckeye	Isaac Moore	June 21	June 21	Colored
59		Buckeye	Alfred King	June 21	June 21	Colored
60	Mingo	Thacker	Kemper McDonald	July 18		American
61		Logan	John Sexton	Sept. 11	Sept. 11	

Fatal Accidents Continued.

Years of Experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total Dependents.	Insurance.	How Killed.	Inquest.	No.
Several	19	Miner	S.					Fall of slate		1
	43	Pick Boss	M	Yes	Yes			Fall from top of car	No	2
10	28	Miner	S.		1			Fall of slate		3
20		Miner	M	Yes				Killed by mine car	No	4
	39	Foreman	M	Yes	2		\$2,000	Run over by mine car	Yes	5
2	18	Miner	S.					Caught betw'n car & post		6
6 months	22	Driver	S.				\$400	Loaded mine car	No	7
10			M	Yes	1	5		Fall of a draw slate		8
25	18	Miner	M	Yes	7	8		Fall of soapstone		9
10	28	Miner	S.				\$200	Fall of slate		10
	30	Parker						Mine car		11
Many years	31	Cager	M	Yes	Yes		\$200	Caught between cages		12
1 mo 10 das		Miner	S.					Under coal		13
5	25	Miner	S.					By electricity		14
Life	53	Sub-Foreman	M	1	8			Electrocuted	No	15
6	21	Miner	M	Yes	N'n		None	Fall of slate		16
2	28	Miner	M	Yes				Fall of breast and top coal	No	17
Many	22	Miner	M	Yes	2		No	Fall of slate		18
10	25	Miner	S.					Mine car		19
2	25	Miner	S.					Fall of draw slate		20
7	22	Miner	S.					Fall of slate		21
1	28	Miner	S.					Fall of slate		22
3	17	Miner	S.					Fall of coal		23
8		Miner	M	Yes	1	2		Mine car		24
10	15	Miner	M	Yes	2	3		Fall of draw slate		25
Many	15	Miner	M	Yes				Fall of slate		26
8	10	Contractor	M	Yes	1	5		Fall of slate		27
Several	25	Miner	S.					Explosion of powder		28
15	28	Miner		Yes		1		Fall of slate		29
5	28	Miner	S.					Fall of slate		30
3 months	25	Laborter	S.					Fall of coal		31
	35	Miner	M		2			Fall of coal		32
15	41	Driver	M	Yes	2	3	\$0	Mine car inside		33
15	62	Miner	M	Yes				Fall of slate		34
6 or 7	20	Miner	S.					Fall of slate		35
15	38	Miner	M	Yes	2			Fall of slate	No	36
6	40	Miner	M		1		0	Fall of slate		37
20	52	Miner	M	Yes	1		No	Fall of slate		38
21½ months	30	Miner	M	Yes	1		0	Fall of slate		39
1	50	Miner	M	Yes	N'n		0	Fall of coal		40
10 months	19	Miner		No	No		0	Fall of slate		41
6	35	Miner	S.	No	No		0	Fell on slate		42
10	30	Miner	S.	No	No		0	Crushed by car		43
Several	22	Miner	S.		1			Fall of coal		44
Many	41	Miner		Yes			\$0	Fall of slate		45
	28	Carpenter	S.	Yes	1			Fall from scaffold		46
	30	Miner	S.	No	No		0	Fall of slate		47
7	30	Miner	S.	No	No		0	Skull crushed		48
10	34	Weigh Boss	M	Yes	No		\$100	Fall of slate		49
15	30	Miner	M	Yes	1		\$100	Fall of slate		50
14	21	Miner	M	Yes	1			Fall of coal		51
14	32	Miner		Yes	1		None	Mine car		52
6	43	Miner		Yes	5	9		Mine car		53
12	40	Miner		Yes	4	5	\$0	Mine car		54
10	35	Contractor	M	Yes	6		No	Fall of slate		55
		Miner	S.	No	No		No	Fall of slate		56
2	30	Miner	S.	No	No		\$0	Fall of slate		57
3	35	Miner		Yes	No		No	Fall of slate		58
	25	Miner	S.	No	No		No	Fall of slate		59
	19	Miner	S.	No	No		No	Fall of slate		60
4		Trapper	S.					Mine car		61
		Miner						Fall of slate	Yes	62

Fatal Accidents—1898-99.

No.	County.	Name of Mine.	Name of Person Killed	Date of		Nationality.
				Injury.	Death.	
62	Mason	Mason City Min'g Co	George Matthews	Apr. 12	Apr. 12	English
63	McDowell	Eureka	Pettus Madden	June 27	July 6	Colored
64		Shawnee	Bird E. Duncan	July 23	July 23	American
65		Elk Ridge	Web Gerdger	July 23	July 23	Colored
66		Algoma	Simpson Wells	July 27		Colored
67		West	Mike Hazel	Aug. 15	Aug. 15	Hungarian
68		Algoma	John Patterson	Aug. 27		Colored
69		Peerless	T. H. Wood	Sept. 15	Sept. 16	American
70		Peerless	Hayburn Ramsey	Sept. 15	Sept. 16	American
71		Gilliam	John Walker	Oct. 4	Oct. 4	Colored
72		Tidewater	Samuel Blackburn	Oct. 4	Oct. 4	American
73		Upland	Henry Irving	Oct. 15	Oct. 15	Colored
74		Angle	Calvin Calloway	Nov. 3	Nov. 3	Colored
75		Gilliam	Henry Mayne	Nov. 21	Nov. 21	Colored
76		Lick Branch	John L. Jones	Dec. 16	Dec. 23	Colored
77		Shawnee	Robert Morehead	Dec. 22	Dec. 22	Colored
78		Algoma	John Hopkins	Jan. 7	Jan. 7	Colored
79		Algoma	John Pugh	Jan. 24	Jan. 24	American
80		Algoma	Lewis Shelont	Feb. 10	Feb. 10	American
81		Crozer	David Brown	Feb. 17	Feb. 17	American
82		Shamokin	John Prunty	Mar. 1	Mar. 1	Colored
83		Shawnee	Calvin Parsons	Mar. 13	Mar. 13	American
84		Tidewater	Edward Clark	Mar. 18	Mar. 18	Colored
85		Keystone	Frank Crenshaw	Apr. 8	Apr. 12	American
86		McDowell	John Belzula	Apr. 14	Apr. 14	Hungarian
87		Indian Ridge	John Bouldin	May 27	May 27	American
88		Indian Ridge	Mat Rogers	June 21	June 21	American
89	Preston	Tunnelton	Richard Trevens	Apr. 5	Apr. 5	English

Fatal Accidents Continued.

Years of Experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total Dependents.	Insurance.	How Killed.	Inquest.	No.
45.....	61	Miner.....	M	Yes	1	.....	.....	Fall of top coal.....	.....	62
5½ mo.....	25	Miner.....	S	.....	.....	.....	\$55.....	Fall of coal.....	.....	63
5.....	25	Miner.....	S	.....	.....	.....	.....	Fall of Kettle bottom.....	.....	64
6.....	26	Miner.....	S	.....	.....	.....	.....	Run over by locomotive.....	.....	65
2 wks.....	18	Miner.....	S	.....	.....	.....	.....	Fall of slate.....	.....	66
15.....	31	Miner.....	M	Yes	2	3	\$50.....	Fall of top coal.....	.....	67
1.....	40	Miner.....	M	Yes	2	3	.....	Fall of coal.....	.....	68
1 mo.....	26	Miner.....	M	Yes	3	4	.....	Explosion of powder.....	.....	69
Several.....	.....	Laborer.....	S	.....	.....	.....	.....	Explosion of powder.....	.....	70
6 mo.....	22	Miner.....	S	.....	.....	.....	.....	Dead in slack bin.....	.....	71
Several.....	25	Miner.....	S	.....	.....	.....	\$50.....	Fall of slate.....	.....	72
Several.....	27	Miner.....	M	Yes	3	.....	.....	Fall of coal.....	.....	73
Several.....	37	Miner.....	M	Yes	1	2	\$50.....	Fall of slate.....	Yes	74
.....	22	Driver.....	S	No.	.....	.....	\$5.....	Fall of slate.....	.....	75
13.....	12	Miner.....	M	Yes	5	.....	.....	Burn from Oil.....	.....	76
1 wk.....	23	Laborer.....	S	No.	No.	.....	\$50.....	Fall of slate.....	No.	77
2 mo.....	24	Miner.....	S	No.	No.	.....	None.....	Fall of slate.....	No.	78
7.....	25	Miner.....	S	No.	No.	.....	None.....	Fall of slate.....	No.	79
.....	.....	Miner.....	S	No.	No.	.....	\$50.....	Fall of slate.....	.....	80
6.....	25	Driver.....	S	.....	.....	.....	.....	Fall of top coal.....	.....	81
.....	24	Miner.....	S	.....	.....	.....	.....	Fall of slate.....	.....	82
.....	30	Miner.....	S	.....	.....	.....	.....	Explosion of powder.....	.....	83
4.....	34	Miner.....	M	Yes	1	.....	\$50.....	Fall of slate.....	.....	84
5.....	35	Miner.....	M	Yes	1	.....	\$2,000.....	Fall of slate.....	.....	85
5.....	27	Miner.....	M	Yes	No.	.....	\$101.15.....	Fall of Coal.....	.....	86
7.....	27	Miner.....	S	.....	.....	.....	None.....	Fall of slate.....	.....	87
30.....	49	Miner.....	M	Yes	1	.....	None.....	Fall of coal.....	No.	88

Non-Fatal Accidents—1898-99.

No.	County.	Name of Mine	Name of Person Injured	Date of Accident.	Nationality.
1	Ohio	Elm Grove	Frank Sisco	Oct. 10	Slav.
2	Ohio	Elm Grove	Joe Sasasah	Oct. 10	Slav.
3	Taylor	Blenington No. 1	M. B. Dilworth	July 21	American
4	Washington	Bladenington	Thomas Layman	Oct. 7	American
5	Washington	Bladenington	Harry Shields	Oct. 11	American
6	Fuellet	Coketon No. 3	Lewis Brown	July 11	Negro
7	Franklin	Coketon No. 3	A. W. Watkins	Aug. 5	Negro
8	Franklin	Coketon No. 3	Abraham Woodridge	Aug. 9	Negro
9	Franklin	Coketon No. 3	T. E. Boggess	Aug. 13	American
10	Franklin	Coketon No. 3	Henry Carter	Sept. 3	Negro
11	Franklin	Coketon No. 3	Alexander Crabass	Sept. 6	Italian
12	Franklin	Coketon No. 3	Peter Watroe	Sept. 7	Italian
13	Franklin	Coketon No. 3	Charles Pyles	Sept. 10	American
14	Franklin	Coketon No. 2	Harry Gallaher	Dec. 3	American
15	Franklin	Coketon No. 2	David Keyser	Dec. 10	American
16	Franklin	Douglas	John Paugh	Jan. 10	American
17	Franklin	Coketon No. 3	Thomas Biggs	Jan. 13	American
18	Franklin	Coketon No. 3	Cecil Bice	Jan. 13	American
19	Franklin	Coketon No. 3	Joe Watroe	Jan. 13	Italian
20	Franklin	Coketon No. 2	Henry Boyer	Feb. 1	American
21	Franklin	Coketon No. 2	Chas. Castill	Feb. 8	American
22	Franklin	Coketon No. 2	Luther Lazader	Feb. 8	American
23	Franklin	Coketon No. 2	Daniel O'Connor	Feb. 10	American
24	Franklin	Coketon No. 3	Smith Washington	Feb. 14	Negro
25	Franklin	Coketon No. 2	Thomas Carrol	Mar. 20	American
26	Franklin	Coketon No. 1	George Johnson	Mar. 20	American
27	Franklin	Coketon No. 2	Guy Martin	Mar. 25	American
28	Marshall	Penwood Mill	John Bohill	July 25	English
29	Marion	West Fairmont Shaft	Vincent Radtha	July 29	American
30	Marion	New England	Charles Welch	July 30	American
31	Marion	Northington	George Wright	Aug. 22	American
32	Marion	Worthington	Santford Rowands	Oct. 7	American
33	Marion	New England	Godfrey M. Shaffer	Oct. 8	American
34	Marion	Mine No. 2 B H	Thomas Rogers	Jan. 24	American
35	Marion	Anderson Mine	James Albert Lee	May 13	American
36	Marion	W. F. Shaft	Robt. J. Floyd	May 13	American
37	Randolph	Randolph Coal Co.	S. C. Brown	April 8	American
38	Monongahela	Beachwood	Dominic Connors	Mar. 13	Irish
39	Monongahela	Beach Grove	Raymond Hudson	Oct. 20	American
40	Monongahela	Beach Grove	John Reuch	Nov. 9	German
41	Monongahela	Mason City Mining Co.	John Moriarity	April 11	Irish
42	Monongahela	New Haven	L. C. Cudiff	April 3	American
43	Monongahela	Winifrede South	David Sweet	July 12	American
44	Monongahela	Keystone	Maudville Darby	Sept. 12	American
45	Monongahela	Big Black Band	William Clendenen	Oct. 1	American
46	Monongahela	Lewisston	Thomas Brown	Oct. 18	Colored
47	Monongahela	Delmont	William Mitchell	Oct. 21	American
48	Monongahela	Charlton	William Jarrell	Nov. 2	American
49	Monongahela	Proctor	Walter Young	Dec. 1	American
50	Monongahela	Grady's Creek "B"	Dan Morris	Dec. 17	American
51	Monongahela	Acme	Booker Storer	Jan. 1	American
52	Monongahela	Big Black Band	George Smith	Jan. 5	American
53	Monongahela	Ronda	Caleb Halstead	Jan. 5	American
54	Monongahela	Iron Creek	A. Walls	Jan. 31	American
55	Monongahela	Iron Creek	Edgar Pearl	Feb. 1	American
56	Monongahela	Iron Creek	Charles Jones	April 19	Negro
57	Monongahela	Ronda	Jacob Sprigell	April 21	American
58	Monongahela	Doncha	Tra J. Mason	April 27	American
59	Monongahela	Charlton	John Kelley	June 13	American
60	Wayne	Moore	Chris Brown	July 16	Colored
61	Wayne	B. Bennett	James Barth	July 19	American
62	Wayne	Bullenger No. 1	Harry Kyle	July 19	Colored
63	Wayne	Central	Arthur Long	Aug. 3	American

Non-fatal Accidents Continued.

Years of Experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained	No.
36	36	Miner.	Explosion of gas.	Hands and feet burned.	1
35	35	Miner	Explosion of gas.	Burned about head and left arm	2
10 das	26	Trackman	Fall of roof	Back and shoulder hurt	3
11	25	Miner	Fall of roof	Leg broken between knee and ankle	4
Several	25	Miner	Fall of roof	Right leg injured.	5
12	55	Miner	Fall of draw slate.	Back and hip injured.	6
10	40	Miner	Fall of coal.	Head and shoulders injured.	7
5	30	Driver.	Mine car	Head and back injured.	8
3 or 4	20	Driver	Mine car	Big toe on right foot mashed.	9
1	20	Miner	Fall of slate	Hand mashed.	10
	25	Miner	Fall of coal	Foot injured.	11
	40	Miner	Fall of coal	Collar bone broken.	12
	25	Miner	Fall of coal	Arm broken, leg and heel mashed.	13
3		Driver	Thrown from mule.	Arm bruised	14
2	21	Shifter	Foot caught in elevator	Foot badly crushed.	15
15	20	Rope-rider	Caught by car.	Leg broken at ankle by bumpers.	16
6	20	Driver	Foot caught by car	Foot crushed by car	17
5	18	Driver	Caught by car.	Hip hurt	18
1	22	Miner	Fall of slate	Hand badly crushed.	19
10	45	Laborer	Leg caught by car	Leg crushed.	20
7	30	Driver	Foot mashed by car.	Foot mashed.	21
6 mos.	14	Slate boy	Fell from elevator.	Shoulder dislocated	22
10	45	Miner	Fall of slate	Collar bone broken.	23
5	25	Miner	Fall of slate	Breast and shoulders bruised.	24
10	10	Miner	Fall of coal.	Breast and stomach hurt.	25
5	30	Laborer	Can't betw'n car & prop	Back hurt.	26
3	21	Laborer	F't can't under car wh'l	Foot crushed.	27
35	55	Miner	Explosion of gas.	Slight bruise on neck and ear	28
7	21	Driver	Can't betw'n car & prop	Injured about the hips.	29
2 das.		Miner	Fall of slate.	Leg broken between knee and hip.	30
8	19	Driver	Fall of draw slate.	Thigh broken.	31
3	18	Driver	Fall of slate.	Scalp wound, foot bruised, other cuts	32
16	37	Roadman.	Fall of slate.	Shoulder, collar bone & 2 ribs broken	33
10	28	Machine Man	Fall of slate.	Leg and ankle broken.	34
8 mos.	22	Miner	Fall of slate.	Cut on eye and back of head	35
10 or 12	51	Miner	Fall of slate.	Hips bruised, ankle & knee sprained	36
2	25	Miner	Fall of coal.	Crushed about breast and body	37
25	39	Miner	Fall of coal.	Cut on head and bruised shoulders.	38
1	21	Miner	Fall of coal.	Back bruised in the region of kidneys	39
17	49	Miner	Struck by flying coal.	Two ribs broken.	40
40	64	Miner	Caught by draw slate.	Head cut and back injured.	42
25	50	Miner	Falling slate	Fractured leg.	41
	35	Miner	Fall of slate.	Leg broken below the knee.	43
7	18	Miner	Fall of top coal	Collar bone, 3 ribs, & left leg broken	44
18	30	Brakeman.	Fell from tram road.	Wrist sprained and head cut.	45
20	37	Miner	Fall of coal	Collar bone broken.	46
3	23	Driver.	Injured at drum house	Foot crushed.	47
15	44	Helper	Fall of draw slate.	Leg broken.	48
Many	30	Driver	Mine car inside.	Sprained in back and hips.	49
Several	23	Miner	Fell from tippie	Bruised.	50
4 or 6	28	Miner	Foot slipped into chain	Amputation of foot at instep.	51
20	36	Miner	Fall of coal.	Leg broken.	52
Many	40	Miner	Post fell striking him.	Bruised about the head and the breast	53
20	45	Miner	Fall of slate.	Slightly bruised.	54
3	22	Miner	Fall of slate.	Hips and one leg bruised	55
13	48	Miner	Fall of slate	Bruised about the shoulders.	56
Many	55	Trackman.	Fall of slate.	Leg slightly bruised.	57
3	21	Miner	Fall of slate	Toes cut.	58
10	35	Miner	Caught by machine.	Leg crushed.	59
		Driver.	Kicked by mule.	Leg broken	60
		Miner	Fall of slate.	Leg broken	61
		Driver.	Fall of draw slate.	Ankle dislocated.	62
Several	20	Miner	Explosion of powder	Burned by powder.	63

Non-fatal Accidents—1898-99.

No.	County.	Name of Mine.	Name of persons Injured.	Date of Accident.	Nationality.
64	Fayette	Thurmond	Ballard Tincher	Aug. 9.	American
65		Forest Hill	Andrew Miller	Aug. 18.	Colored
66		Rush Run	Samuel Boyd	Aug. 22.	Colored
67		Star	J. W. Upton	Sept. 8.	American
68		Ganley Mt	R. C. Rogers	Sept. 26.	American
69		North Side	William Short	Nov. 5.	American
70		Brooklyn	John Aliff	Nov. 16.	American
71		Sum	Thomas Price	Nov. 26.	Negro
72		Blume Co.	John Green	Dec. 29.	Negro
73		Edgewater	J. J. Howell	Jan. 18.	American
74		Dubree	Henry Hull	Jan. 20.	American
75		St. Clair No. 2.	James Anderson	Jan. 31.	American
76		St. Clair No. 1	C. F. Hanagan	Apr. 7.	American
77		Nattallburg	John Furgusson	Apr. 8.	Negro
78		North Side	Ben M. Murphy	Apr. 21.	American
79		Vulcan	Thomas Hughes	Apr. 21.	American
80		Vulcan	William G. Pleasants	June 22.	American
81		Greenwood	E. J. Cotton	June 29.	American
82	Mingo	Logan Con	Isaac Whiteley	July 9.	American
83		Thacker	Lewis Long	Aug. 15.	American
84		Logan Con.	J. B. Collins	Aug. 22.	American
85		Lynn	C. H. Shafer	Nov. 29.	American
86		Thacker	W. L. Robinson	Mar. 23.	American
87		Logan	Frank Freddy	June 22.	American
88	McDowell	Pulaski	James Harvey	July 16.	Colored
89		Pulaski	Archer Gray	July 23.	American
90		Pulaski	Charles Brimm	July 27.	Colored
91		Turkey Gap	Ben Hancock	Aug. 1.	American
92		McDowell	John Satmare	Aug. 8.	Hungarian
93		McDowell	William Burnett	Aug. 3.	Negro
94		Turkey Gap	Yancy Carter	Aug. 16.	American
95		Norfolk	Napoleon Calloway	Aug. 16.	Negro
96		Lick Branch	R. M. Miller	Aug. 18.	Negro
97		Angle	John Armistead	Aug. 23.	Negro
98		Lynchburg	James Smith	Aug. 27.	Negro
99		Powhatan	William C. Wallace	Aug. 29.	American
100		Powhatan	Mose Archer	Sept. 6.	Negro
101		Lynchburg	William Staples	Sept. 6.	Negro
102		Lynchburg	Edward Withers	Sept. 6.	Negro
103		Houston	Peter Whitsett	Sept. 13.	American
104		McDowell	Geo. W. Wells	Sept. 14.	American
105		Pulaski	William Tucker	Sept. 27.	Negro
106		Elk Ridge	Jake Moore	Oct. 5.	American
107		McDowell	Chas. Cattrell	Oct. 8.	Colored
108		McDowell	C. A. Turpin	Oct. 10.	Colored
109		Shawnee	John Clark	Oct. 10.	Colored
110		McDowell	Samuel Ward	Oct. 11.	American
111		Tidewater	Samuel Cherry	Oct. 26.	Colored
112		Greenbrier	Thomas Phillips	Nov. 9.	American
113		Algoma	Fountain Saunders	Nov. 14.	Colored
114		Tidewater	C. H. McDaniel	Nov. 15.	American
115		Turkey Gap	William Emerson	Nov. 15.	Negro
116		Greenbrier	Thomas Bellis	Nov. 22.	English
117		Turkey Gap	Perkins Miller	Dec. 8.	Negro
118		McDowell	John Satmore	Dec. 9.	Hungarian
119		Norfolk	James Wharf	Dec. 29.	American
120		Lick Branch	Thornton Taylor	Jan. 2.	Negro
121		Pulaski	Geo. Harriston	Jan. 9.	Negro
122		Indian Ridge	Thos. Griffith	Jan. 17.	American
123		Shamokin	Henry Godfrey	Jan. 23.	American

Non-fatal Accidents Continued.

Years of Experi- ence.	Age.	Occupation.	Nature of Accident.	Injuries Sustained	%
5	25	Miner	Fall of slate	Leg broken	61
		Miner	Fall of coal	Broken breast bone	65
12	40	Miner	Fired gas	Burnt	66
1	29	Driver & miner	Caught bet' roof & w box	Right side & back injured, and three ribs broken	67
15 or 20	40	Miner	Fall of roof	Leg broken below the knee	68
2	32	Miner	Fall of draw slate	Dislocation and fracture of left wrist, a slight cut on face	69
4	19	Laborer	Explosion of powder	Back of legs and left hand burned	70
3	21	Driver	Explosion of gas	Face burned	71
	23	Driver	Fell under car	Hip broken	72
	10	Blacksmith	Caught between cars	Leg bruised	73
10	37	Miner	Fall of slate	Foot mashed	74
4	16	Miner	Fall of slate	Cut on head and mashed in hips	75
	21	Driver	Car left track	Slightly hurt in back and hips	76
10	45	Miner	Fall of slate	Leg broken	77
23	35	Miner	Fall of slate	Fracture of left leg	78
Many	28	Miner	Fall of coal	Leg broken	79
	37	Miner	Fall of coal	Collar bone broken	80
	18	Laborer	Mine car	Leg injured	81
8	23	Miner	Fall of slate	Compound fracture of right tibia and other injuries	82
1	17	Driver	Fell from moving car	Ankle severely bruised	83
		Electrician	Thrown off of car	Fracture of forearm near wrist	84
12	27	Driver	Attempt'g to board car	Lower leg mashed	85
	30	Blacksmith	Explosion of dynamite	Wound in thigh	86
			Fall of slate	Dislocation of hip joint, fracture of pelvis	87
1½	29	Helper	Mine machine	Right heel cut off	88
4	30	Spragger	Fall of slate	Contusion of head, shoulders, loins, and back sprained	89
7 das.	30	Timber man	Fall of kettle bottom	Left leg broken above ankle	90
12	30	Miner	Fall of coal	Arm broken	91
7	48	Miner	Flying coal	Leg injured	92
	23	Miner		Sprained hip and punctured lower lip	93
12	28	Miner	Fall of slate	Leg broken	94
Several mos	25	Car dropper	Mine car	Humorous broken	95
Several	35	Miner	Fall of draw slate	Thigh broken	96
1½	45	Miner	Struck by coal	Knee badly bruised and bone in hand broken	97
	21	Miner	Fall of slate	Back injured	98
	25	Ass't tr'k lay'r	Fall of black slate	Bones of right foot broken & foot cut	99
	25	Miner	Fall of coal	Leg bruised and cut, thumb cut off & chest injured	100
4 mos	20	Miner	Fall of slate	Slightly bruised	101
3	21	Miner	Fall of slate	Leg broken	102
10	35	Miner	Mine car	Collar bone broken	103
9 mos	23	Miner	Fall of slate	Head and left leg injured	104
2	30	Miner	Fall of coal	Upper part of the left ear cut off	105
20	37	Miner	Fall of coal	Left foot crushed, necessitating amputation	106
4	28	Miner	Fall of slate	Muscle in right shoulder sprained	107
10 das.	23	Bone picker	Mine car	Fracture of radius and incision from wrist to elbow	108
5 mos	25	Slateman	Explosion of dynamite	Left hand shot off, first joint of middle finger and eye injured	109
2½	22	Miner	Fall of coal	Comp. fracture of leg at upper third	110
Several	20	Miner	Fall of kettle bottom	Right leg broken above knee	111
5	20	Driver	Mine car	Ankle joint of left leg dislocated, and capular ligament ruptured	112
3	18	Laborer	Fall of slate	Leg fractured above ankle	113
2	30	Miner	Fall of coal	Small bone in left leg fractured	114
8	28	Miner	Fall of coal	Mashed ankle	115
Many	15	Miner	Fall of coal	Leg and thigh bruised	116
2	27	Brakeman	Handling props	Face cut and bruised	117
	10	Miner	Caught by car	Leg fractured	118
2½	35	Miner	Fall of slate	Loss of toe	119
1	18	Miner	Struck by falling prop	Slight	120
1 wk	18	Miner	Fall of coal	Right leg fractured	121
	35	Miner	Fall of slate	Ankle joint mashed	122
0	42	Miner	Fall of coal and slate	Face and hips bruised	123

Non-fatal Accidents—1898-99.

No.	County.	Name of Mine.	Name of Person Injured.	Date of Accident.	Nationality.
121	McDowell	Indian Ridge	Samuel Sayres	Jan. 21	American
125		Norfolk	Pink Hinsley	Feb. 7	American
126		Lick Branch	William Turner	Feb. 17	Negro
127		Crozer	Paul Jackson	Feb. 18	American
128		Pulaski	William Turner	Feb. 18	Negro
129		Greenbrier	Pat Oglesby	Feb. 20	Negro
130		Tidewater	Elfer Aveny	Mar. 10	Negro
131		Upland	J. N. Shelbourne	Mar. 16	American
132		Pulaski	M. T. Sutphin	Mar. 17	American
133		Lynchburg	John Hancock	Mar. 18	Hungarian
134		Pulaski	H. B. Payne	Mar. 21	Negro
135		McDowell	John McCaden	Apr. 6	Negro
136		Greenbrier	Geo. W. Scott	Apr. 13	American
137		Pulaski	John Harvey	Apr. 25	Negro
138		Norfolk	John Koger	Apr. 28	Negro
139		Norfolk	Chas. Deaton	May 2	Negro
140		Norfolk	Lloyd Koger	May 5	Negro
141		Bottom Creek	Dal Goms	May 10	Negro
142		Lick Branch	Lafayette Elliott	May 11	Negro
143		Algoma	Frank Gauthier	May 18	American
144		Elk Ridge	Warren Broomfield	May 27	American
145		Greenbrier	Ed Belcher	June 7	American
146		Lick Branch	Ben Cordle	June 19	American
147	Meer	Louisville	Lawrence Hill	July 20	Colored
148		Louisville	D. R. Vaughn	July 25	American
149		Louisville	D. Evans	July 25	American
150		Louisville	Robert Taylor	Aug. 1	American
151		Buckeye	Ed Thomas	Aug. 17	Colored
152		Caswell	Glen Hatcher	Aug. 23	American
153		Caswell	Henry Ward	Aug. 23	American
154		Goodwill	John Satterfield	Aug. 29	Colored
155		Coaldale	Tyler Grovelly	Sept. 16	American
156		Coaldale	R. W. Mosley	Sept. 16	American
157		Goodwill	Andrew Freddie	Oct. 13	English
158		Louisville	Burt Epperson	Oct. 11	American
159		Louisville	John Frog	Oct. 19	Colored
160		Coaldale	Floyd Walker	Oct. 21	American
161		Coaldale	James F. Smith	Oct. 21	American
162		Louisville	Tyler Duddley	Oct. 25	Colored
163		East	Oscar Bird	Nov. 18	American
164		Goodwill	Martin Hoovath	Nov. 23	Hungarian
165		Louisville	Frank Pondexter	Dec. 19	Colored
166		Coaldale	Wm. M. Brooks	Dec. 20	American
167		Goodwill	A. T. Dillon	Jan. 21	American
168		Coaldale	Robt. Rickman	Feb. 1	American
169		Coaldale	John Rayford	Feb. 1	Colored
170		Goodwill	Chas. Sanders	Feb. 8	Colored
171		Goodwill	William Lawson	Mar. 25	Colored
172		Coaldale	Anthony Msaek	May 22	Hungarian
173		Coaldale	Robt. Mitchell	June 5	Negro
174		Louisville	Joe Luppie	June 20	Hungarian
175		Buckeye	Robt. Grisby	June 21	Negro

Non-fatal Accidents Continued.

Years of experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.	No.
5	27	Laborer	Fall of coal and slate	Left leg fractured	124
2	21	Miner	Explosion of powder	Eyes slightly burned	125
4 mos	25	Ass't. dumper	Hand caught by car	Finger bones fractured	126
Several	30	Miner	Fall of coal	Ankle sprained	127
2	30	Miner	Fall of coal	Leg broken	128
6	30	Driver	Caught by car	Right foot mashed	129
2	30	Miner	Fall of slate	Scalp wound	130
7 mos	30	m'chine h'lp'r	Fall of slate	Head and hand bruised	131
2 mos	18	Miner	Fall of coal and slate	Left leg fractured	132
4	20	Brakeman	Fall of slate	Wound on scalp and shoulders	133
4 mos	31	Laborer	Fall of prop	Left leg broken	134
3	25	Miner	Fall of slate	Leg broken	135
2	22	Driver	Can't betw'n car & prop	Rib fractured, bruises	136
2	30	Driver	Run o'er by m'chine tr'k	Foot and leg crushed	137
Several mos	16	Brakeman	Jumping from motor	Left leg cut	138
5	30	Miner	Pulled down coal	Contusion of knee and ankle	139
2	20	Driver	Caught betw'n bump'rs	Contusion of ankle	140
Several	30	Miner	Fall of coal	Leg broken	141
1	25	Miner	Fall of slate	Right leg fractured	142
1	25	Laborer	Foot Can't by bumpers	Foot crushed	143
6 mos	24	Miner	Fall of coal	Leg broken	144
25	22	Miner	Explosion of powder	Face, hands, and arms burnt	145
25	25	Miner	Fall of slate	Toes crushed	146
2	22	Driver	Mine car	Left leg bruised, left thumb mashed, and face cut	147
5	40	Miner	Piece of slate broke	Large toe of right foot mashed	148
2	25	Miner	Fall of coal	Right foot and ankle sprained	149
3	22	Miner	Explosion of powder	Eyelids badly burned	150
1	32	Miner	Fall of slate	Hip injured	151
2	27	Miner	Fall of top coal & slate	Slight sprain of knee	152
1	21	Miner	Fall of top coal & slate	Fracture of right thigh	153
3 mos	22	Laborer	Fall of draw slate	Injured in lumbar region	154
1 mos	21	Laborer	Mine car	Hand mashed and torn	155
2	18	Miner	Fall of coal	Knee sprained	156
3 mos	17	Asst. to par'nt	Fall of draw slate	Ankle dislocated	157
2	14	Trapper	Fell under mine car	Right foot and leg bruised	158
6	40	Miner	Fall of slate	Lower part of back bruised	159
5	20	Miner	Explosion of cartridge	Hands, face, and back of head burn'd	160
10	11	Miner	Explosion of cartridge	Hands, face, and back of head burn'd	161
3	23	Min'r & driv'r	Fall of slate	Injured in pelvic region	162
7 mos	17	Miner	Fall of coal	Leg broken below knee	163
1 da	Miner	Fall of coal	Leg broken, ankle mashed, hips and lumbar region injured	164	
5 mos	35	Driver	Car left track	Ankle sprained	165
21	Miner	Caught by coal	Leg broken at ankle	166	
33	Miner	Fall of slate	Cut on back and head	167	
30	Miner	Fall of coal	Hurt on arms and back	168	
35	Driver	Fall of coal	Head and back hurt	169	
27	Miner	Fall of slate	Foot mashed	170	
19	Miner	Fall of slate	Shoulder and leg injured	171	
25	Miner	Fall of coal	Foot crushed	172	
1 mo	35	Driver	Caught by car	Back and left leg injured	173
30	Miner	Fall of slate	Wrist cut	174	
10	30	Miner	Fall of slate	Back scraped	175

Serious Accidents—1898-99.

No.	County.	Name of Mine	Name of Person Injured.	Date of Accident	Nationality.
1	Kanawha	Ronda.	Walter Young	Dec. 1.	American
2		North.	William Kirby	May 26	American
3		Campbell's Creek No. 1.	John Winsfree	Jan. 14.	American
4	Fayette	Dimmock	William Pitt	Dec. 27.	American
5		Fire Creek.	Robt. Boyde.	Feb. 25	Scotch.
6		Brooklyn C. Co's.	Samuel Mosby.	Mar. 3.	Colored.
7	Marion	Montana.	J. C. Morris.	Mar. 3.	American
8		Montana	John Repho	Mar. 10	Slav.
9		Anderson	Wayne Martin	Apr 8.	American
10		New England.	Sam Merosh	May 2.	Italian.
11	Mason	New Haven	Edward Turley	Mar. 21	American
12	Mercer	Louisville	J. W. Granes	Dec. 13.	American
13		Louisville.	W. M. Coapey.	Dec. 20.	American
14		Louisville	C. Edwards	Jan. 26.	American
15		Louisville.	Ed McComas.	Feb. 18.	American
16	Mingo	Thacker.	Martin Meade.	Feb. 10.	American
17	McDowell	Elk Ridge	Reese Smite.	Dec. 17.	Virginian.
18		Lynchburg.	Jessie Willson	Dec. 24.	American.

Serious Accidents Continued.

Years of Experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.	No.
.....	.....	Driver.....	Fell from Mining car..	Dragged some distance and rendered unconscious	1
10 or 12....	28	Driver	Caught by bumpers and piece of slate	Right leg fractured below knee.	2
20	43	Miner	Jumped from electric engin' can't & dragg'd	Left arm brok'n at elbow other injuries	3
10	22	Driver.....	Struck by falling kettle bottom.....	Spinal column dislocated.....	4
25 or 30....	43	Miner Boss..	Caught by mine car....	Impacted fracture of neck of femur...	5
.....	26	D'mp'r on tip'	Caught by mine car....	Right leg and arm broken.....	6
4	61	Miner	Fall of coal.....	Arm broken, cut above eyes & on head	7
5	28	Miner	Fall of coal	Collar bone broken and head cut.....	8
2	20	Driver.....	Can't between car & rib	Squeezed and strained back and hips	9
6 mos.....	32	Miner	Can't between car & rib	Collar bone broken, cut about head and face.....	10
6	35	Miner	Fall of slate	Back broken and other injuries.	11
6 mos.....	30	Miner	Struck by kettle bottom	Head cut, bruised about hips and lumbar region	12
5	23	Miner	Fall of draw slate	Right eye much inflamed.....	13
Several....	30	Miner	Fall of coal.....	Left leg broken, bruised all over body	14
4	21	Miner	Fall of coal.....	Head cut, right ankle badly bruised, and bruised all over body.....	15
20.....	42	Miner	Fall of slate.....	Spine injured, causing paralysis of lower part of body.....	16
3	19	Miner	Fall of slate.....	Right foot crushed.....	17
8	32	Miner	Fall of coal.....	Hips mashed and pelvis fractured	18

FATAL ACCIDENTS.—DESCRIPTION.

1898-1899,

HARRISON COUNTY.

Nov. 1. Robert M. George, Glen Falls Mine, was killed by a fall of slate. Purely accidental is the opinion of Mine Inspector S. A. Lewis.

Dec. 9. Peter Gill, Farnum Mine, was killed by being knocked off and under the cars on tipple siding. Death was instantaneous. Report by S. A. Lewis.

MARION COUNTY.

Aug. 16. James L. Hughes, Hughes Mine, was killed by a fall of slate. He went in the mine to get some coal, and as the mine had not been used for some time was very dangerous, while working the slate fell burying him, in which condition he remained for six hours before discovered.

Dec. 5. Charles F. Arnold, New England Mine, was killed by mine car which he was riding, jumping the track and catching him between the car and the rib crushing him. Death was instantaneous. No inquest held.

Dec. 6. Staten A. Barnes, Monongah Mine No. 2, was killed by being run over by mine cars. Witnesses at the inquest stated that he was killed instantly by loaded train of mine cars running over him, and that his body was badly mangled.

Jan. 24. George Jack, West Fairmont Shaft mine, was killed by being caught between car and prop. He went to draw a loaded car out when the mule started off very rapidly and the deceased went to jump on the car when he was caught and killed.

MINERAL COUNTY.

Mar. 2. William Fant, Elk Garden, was killed while trying to board the front end of a loaded trip. This was in violation of the rules of the company as no one is allowed to ride on a loaded trip.

MONONGALIA COUNTY.

Nov. 26. S. E. McElroy, Beechwood Mine, was killed by a fall

of draw slate while slabbing up a pillar. The jury rendered the following verdict: "That the said Samuel E. McElroy came to his death by injuries received in the Beechwood mine by the fall of draw slate."

PRESTON COUNTY.

Apr. 5. Richard Trevens, Tunnelton Mine, was killed by falling coal. He was preparing to make a blast and while he was working the coal, which he had neglected to prop, fell, crushing him.

MARSHALL COUNTY.

Sept. 12. William Leithe, Boggs Run mine, was killed by a fall of soapstone. Deceased was driving a passageway and failed to set his props in time.

TUCKER COUNTY.

Aug. 20. James Dufty, Douglas No. 2, was killed by a fall of slate. Following is the statement of S. A. Lewis: "The deceased was sitting on the roadside at a switchoff when a small piece of slate fell and struck him on the back. The blame cannot be placed on any of the mine officials as such a small piece of slate could be very easily overlooked"

Sept. 5. Corisimi Ombach, Coketon No. 2, was killed by being caught by the running boards on the new B & O. cars which extend over the ends.

Sept. 19. John Farley, Thomas Shaft mine, was killed by being caught between cage and loaded car. S. A. Lewis reports that it was purely neglect on his part as the shaft is lit by electric light. Deceased was insured for \$200.00.

Jan. 11. David Brown, Thomas Shaft, was killed by a fall of coal. He was warned not to go under the coal but paid no attention to the warning.

June 6. Tony Trump, Thomas Drift mine, was killed by catching hold of a live wire and died in ten minutes. No inquest held.

June 29. Patrick McVeigh, Coketon No. 3 Mine, was killed by falling and coming in contact with a live wire. Death was instantaneous. No inquest was held.

TAYLOR COUNTY.

June 16. John Fetzak, Flemington Mine, was killed by a piece of slate falling from the roof of his room.

KANAWHA COUNTY.

Oct. 12. Charley Stanley, No 5 Seam Mine, was killed by a fall of slate caused by an attempt on the part of the deceased to undercut coal after having shot it.

Feb. 3. Marion Selby, Blue Hole Mine, was killed by a fall of slate.

PUTNAM COUNTY.

Nov. 11. Ben Kelley, Plymouth Mine, was killed by being knocked off of a car and falling a distance of sixty feet.

FAYETTE COUTY.

June 27. George Daniels, Star Mine, was killed by a fall of slate. Draw slate fell while he was making a cut, injuring him from the effects of which he died on July 2.

July 1. James Jackson, Big Q Mine, was killed by fall of slate while breaking off an air course from entry.

July 1. Charles Moss, Big Q. Mine, was killed by a fall of slate while breaking off an air course from entry.

July 9. Joseph Porter, Crecent Gas coal mine, was killed by a fall of coal. He was under cutting when the coal fell, crushing him, from the effects of which he died on July 15.

July 11. John Scott, Sun Mine, was killed by being caught between top car and roof of slope.

July 18. Englebert Arndt, Cunard Mine, was killed by a fall of draw slate. The sworn statement of the jurors is, "that the deceased came to his death at Cunard, W. Va., by an accident in his working place in Cunard mine."

July 22. James Harvey, Collins mine, was killing by a fall of slate. He had just finshed loading a car when the slate fell knocking his head against the car.

July 27. Isaac C. Barrett, Collins mine, was killed by a fall of slate catching him and killing him instantly.

Aug. 3. Sammel Smith, Central mine, was killed by the explosion of powder caused by his striking a keg a powder with his pick, which made the powder explode.

Aug. 25. Hill Dawson, Turkey Knob mine, was killed by a fall of slate. The deceased had cut through a pillar and while standing between the ribs of pillar watching the men remove the fallen slate, the slate fell crushing him.

Sept 12. Charles Daniels, Harvey No. 1 mine, was killed by a fall of slate. It was purely accidental.

Oct 5 John Richardson, Red Ash mine, was killed by a fall of coal while shoveling the slack produced by the operation of the mine machine.

Oct. 22. Robert Thompson, Echo Mine No. 2, was killed by the front grip car which he was riding, jumping the track, mine car following catching him between the car and rib, crushing him and killing him instantly.

Nov. 10. William Mason, Edgewater mine, was killed by mine car running over him. He was walking beside his mule team when he caught his foot and fell under the car.

Nov. 22. Silas P. Thompson, Rush Run mine, was killed by a fall of slate. Deceased was blasting top in heading when the slate fell.

Nov. 23. Luther Miner, Greenwood mine, was killed by a fall of slate. Anthony Brown who was working with the deceased says they were taking out a little coal sprag, when without any warning the slate gave way injuring Brown and killing Miner.

Dec. 28. William Watts, Ballenger mine No. 2, was killed by a fall of slate caused by his neglecting to keep up his props.

Jan. 12. John F. Biggs, Sugar Creek mine was killed by a fall of slate on which he was working. He knew the slate was loose but failed to put up his props.

Feb. 6. J. W. Nicely, No. 3 or Old mine, was killed by falling slate. The deceased was mining pillars where he had been forbidden to do so.

Feb. 16. W. M. Johnson, Cliff Top mine, was killed by falling slate. He was shooting coal from the solid and did not stop to post his room as he should have done.

Feb. 20. James Parker, Star Mine, was killed by a fall of coal. The deceased was finishing up a cut when the top coal fell on him killing him instantly.

Mar. 21. George Bland, Greenwood, was killed by a fall of slate. He had been working on entry pillars and was sitting down when the slate fell.

Mar 21. Enoch Cotton, Greenwood, was killed by a fall of slate. He was working with George Bland on entry pillars when the slate fell which killed them both.

Apr. 3. James O'Connors, Central, was killed by a collision of

mine cars. He was riding down the slope in violation to the company's orders when the cars were wrecked.

Apr. 15. J. E. Wallace, Harvey mine, was killed by a fall of coal. He had made two shots and when the coal did not fall he began working under it and as he was working the coal fell, killing him instantly.

Apr. 17. Henry A. Comer, Dunloop No. 1 Mine, was killed by a fall of slate. The slate was very dangerous and had not been properly timbered.

Apr. 19. Stephen Huddleston, Longacre Mine, was killed by falling from a scaffold while at work on tippie machinery.

May 9. Fred Tate, Collins Mine, was killed by a fall of slate caused by improper timbering.

May 10. Charles Pettigrew, Edgewater Mine, was killed by putting his head through the spokes of a wheel used in placing barges under the tippie. The accident was caused by the deceased's own carelessness.

May 22. Lewis C. King, Dunloop No. 2, was killed by a fall of slate caused by not being properly timbered.

May 29. Lee Smoot, Beechwood mine, was killed by a fall of coal. He was mining underneath soft without leaving sprag. There were plenty of timbers he could have used but neglected to do so.

June 19. Alt. Burgess, Smokeless mine, was killed by incline rope breaking and letting the car run into the tippie, catching Burgess and injuring him from the effects of which he died on the 21st.

MERCER COUNTY.

Sept. 20. John Jerdon, Coaldale Mine, was killed by mine cars. The cars had been pulled out of the mine when the grip was let loose and the cars ran back into the mine catching the deceased and killing him instantly.

Sept. 20. Albert Preston, Coaldale mine, was killed by mine cars. The cars had been pulled out of the mine when the grip was let loose and the cars ran back into the mine, catching Preston and killing him instantly.

Feb. 4. John S. Collins, Klondike mine, was killed by a fall of slate. He was taking out props when the slate fell killing him.

Apr. 3. John F. Ratcliff, Goodwill Mine, was killed by a fall of slate. He was warned not to go under the slate but did not heed the warning.

Apr, 19. J. W. Graves, Louisville Mine, was killed by falling slate. He was working when he struck a slip in slate which fell on him.

June 20 Alex. Naggie, Louisville mine, was killed by a fall of slate. The accident was caused by Naggie shooting into and breaking top slate. Everything was done to get the man out alive.

June 21. Isaac Moore, Buckeye, mine, was killed by a fall of slate. This accident was purely accidental as the place was not considered at all dangerous.

June 21. Alfred King, Buckeye mine, was killed by a fall of slate. He had stopped to talk to Isaac Moore when the slate fell killing them both.

MINGO COUNTY.

July 18. Kemper McDonald, Thacker mine, was killed by mine cars. He was riding up the incline against positive orders not to do so when the car he was in was struck by another car coming down.

Sept. 11. John Sexton, Logan Mine, was killed by a fall of slate. He was found heavily weighted down with slate which had accidentally fallen on him.

MASON COUNTY.

Apr. 12. George Matthews, Mason City Mine, was killed by a fall of top coal. His death was caused by the accidental falling of coal.

MCDOWELL COUNTY.

June 27. Pettus Madden, Eureka mine, was killed by a fall of coal. Deceased was making a cut under base of coal in his room when it fell injuring him from which injuries he died on the 9th of July.

July 23. Bird E. Duncan, Shawnee mine, was killed by the fall of a "kettle bottom."

July 23. Web. Gerdger, Elk Ridge mine, was killed by locomotive running over him. Deceased was lying asleep on track on oven, and the locomotive in charging ovens ran over him, killing him instantly. He was not in the employ of the coal company.

July 27. Simpson Wells, Algoma mine, was killed by a fall of slate. The slate was too close to the face of the coal to prop.

Aug. 15. Mike Hazel, West mine, was killed by a fall of coal. He was loading a car when the top coal gave way and fell on him, crushing him to death.

Aug. 27. John Patterson, Algoma mine, was killed by a fall of coal. The deceased and George Jones, were making a cut when Patterson began backing up the loose end when the coal fell catching them both killing Patterson but not injuring Jones.

Sept. 15. T. H. Wood, Peerless mine, was killed by an explosion of powder. The deceased was opening a keg of powder. To do so he struck it with his pick causing a spark which made the powder explode, burning both himself and his partner, from the effects of which they died on the 16th.

Sept. 15. Hayburn Ramsey, Peerless mine, was killed by an explosion of powder. His partner, to open a keg of powder, struck it with his pick which caused the powder to explode, killing them both.

Oct. 4. John Walker, Gilliam mine, was killed by being suffocated in the slack bin. It is supposed that he went to sleep on a sheet of iron above the bin and rolled into the bin thus dislodging a body of loose slack in which he was suffocated.

Oct. 4. Samuel Blackburn, Tidewater mine, was killed by a fall of slate. Deceased was loading coal when the slate fell killing him instantly. He had been told that the slate was loose.

Oct. 15. Henry Irving, Upland mine, was killed by a fall of coal. The verdict of the jury was, "that the deceased came to his death by an act of carelessness on his own part."

Nov. 3. Calvin Calloway, Angle mine, was killed by a fall of slate. Four miners were drawing a stump when the slate began working. They pushed the partly loaded car out on account of danger. Calloway returned, contrary to warnings, to get his shovel when the slate fell, killing him instantly.

Nov. 21. Henry Payne, Gilliam mine, was killed by a fall of slate. He insisted on loading cars when he knew the slate was loose.

Dec. 16. John L. Jones, Lick Branch mine, was killed by being burned by oil. He broke a bottle of oil in his pocket and in holding his lamp back to see what he had done he set fire to his clothing, from which he died on the 23rd.

Dec. 22. Robert Morehead, Shawnee mine, was killed by a falling "kettle bottom." He had been told to prop it but had neglected to do so.

Jan. 7. John Hopkins, Algoma mine, was killed by a fall of slate which had seemed perfectly safe a few minutes before.

Jan. 24. John Pugh, Algoma mine, was killed by a falling "kettle bottom," which had been sounded just before and was considered safe.

Feb. 10. Lewis Shelont, Algoma mine, was killed by a falling "kettle bottom." He and his brother were working together and had been told to prop the slate but had failed to do so.

Feb. 17. David Brown, Crozer mine, was killed by a fall of slate. The deceased and another were working together and had just finished cutting through a pillar when the slate fell catching Brown, killing him instantly.

March 1. John Prunty, Shamokin mine, was killed by falling coal. Deceased was bringing a car out of a room faster than he should and when he got to the mouth of the room he put the brake down very suddenly, causing the car to lurch to one side striking a prop which caused the coal to fall.

Mar. 13. Calvin Parsons, Shawnee mine, was killed by falling slate. He had left his own room and gone to another to borrow a file and while standing there filing the slate fell.

Mar. 18. Edward Clark, Tidewater mine, was killed by an explosion of powder. Deceased went into the mine before the fire boss had examined the gas. He set the gas off also a can of powder he had on his person.

Apr. 8. Frank Crenshaw, Keystone mine, was killed by a falling "kettle bottom." The deceased had not noticed that it was dangerous.

Apr. 14. John Bezula, McDowell mine, was killed by falling slate. Deceased was drawing pillars and failed to take down draw slate under which he was working when the slate fell.

May 27. John Bouldin, Indian Ridge mine, was killed by a fall of coal. He had been warned not to undercut to any great extent on account of the loose nature of the coal.

June 21. Mat Rogers, Indian Ridge mine, was killed by a fall of slate. The deceased knew of the dangerous condition of the slate but had neglected to prop it.

CHAPTER XV.

INSPECTIONS MADE DURING THE YEAR.

During the year each district mine inspector made 212 regular inspections of mines, in addition to the visits made to mines for the purpose of investigating accidents. This is an increase of 38 inspections over the previous year for each inspector. Considering that there is considerable clerical work to be done by the district inspectors in the nature of monthly reports to the Chief Mine Inspector, it may readily be seen that the time of the district inspector is well occupied.

Number of inspections made in the State from July 1st, 1898, to July 1st, 1899.

Districts.	No. of Mines.	1898 July 1898.	August.	September.	October.	November.	December.	1899. January.	February.	March.	April.	May.	June.	Totals.	Small Mines.	Grand Totals.
First	75	17	17	21	17	16	17	5	5	18	25	20	22	200	...	200
Second	81	35	23	...	25	2	33	...	...	18	13	10	22	201	31	235
Third	76	18	22	17	13	21	15	10	13	18	16	21	20	204	...	204
Fourth	52	16	13	19	17	11	23	19	9	23	17	21	21	209	...	209
Totals	284	86	73	57	72	50	78	31	27	77	101	72	85	814	...	848

CONDITION OF THE MINES, BY DISTRICTS, FOR THE YEAR 1899.

James W. Paul, Chief Mine Inspector, Charleston.

Stephen A. Lewis, Mine Inspector, First District, Fairmont.

Jerry Meade, Mine Inspector, Second District, Charleston.

Edward Pinkney, Mine Inspector, Third District, Montgomery.

Wm. J. Preece, Mine Inspector, Fourth District, Coaldale.

OFFICE OF CHIEF OF MINE INSPECTOR,

Charleston, W. Va., July 1st, 1898.

To the Mine Inspectors of the Second and Third Mining Districts:

SIRS:—From the reports made by the Mine inspectors of the Second

and Third mining districts of this state there are a greater number, by forty, of mines in the Third district than in the Second district. This is due to the suspension of mines in some parts of the Second district and an increase in the number of mines in the Third district.

In order to make a more judicious distribution of the work between the inspectors of the Second and Third districts, taking into account the extent of the mines and the distance over which the inspectors are obliged to travel, the Third district inspector will be relieved from the inspection of mines in Kanawha county and all mines in Kanawha county will hereafter be inspected by the mine inspector of the Second district.

This order will take effect July 1st, 1898, and is made in accordance with sections 1 and 3 of the Acts 1897.

Respectfully,

JAMES W. PAUL,

Chief Mine Inspector.

The mining districts of the State now comprise the following list of counties

FIRST DISTRICT.

Barbour, Berkeley, Brooke, Doddridge, Grant, Hardy, Hampshire, Harrison, Hancock, Jefferson, Lewis, Marshall, Marion, Mineral, Monongalia, Morgan, Ohio, Preston, Pendleton, Randolph, Taylor, Tucker, Tyler, Upshur and Wetzel.

SECOND DISTRICT.

Braxton, Calhoun, Cabell, Clay, Gilmer, Jackson, Mason, Pleasants, Putnam, Ritchie, Roane, Wayne, Wirt, Wood and Kanawha

THIRD DISTRICT.

Fayette, Greenbrier, Monroe, Nicholas, Pocahontas, Raleigh, Summers and Webster.

FOURTH DISTRICT.

Boone, Lincoln, Logan, McDowell, Mercer, Mingo, and Wyoming.

DISTRICT INSPECTORS' ANNUAL REPORTS TO THE
CHIEF MINE INSPECTOR,

FIRST DISTRICT, S. A. LEWIS, INSPECTOR.

Fairmont, W. Va., Dec. 1st, 1899.

Hon. James W. Paul,
Chief Mine Inspector,
Charleston, W. Va.

SIR:—In compliance with the mining statutes relative to the condition of mines, I have the honor to submit to you my report for the year ending June 30th, 1899. Regarding the ventilation and general safeness of the mines throughout my district at the present they are improving very rapidly. There have been twelve fans erected and put into operation during the year, thus insuring to the miners better ventilation. There have been numerous other improvements, such as drainage and general improvements on the inside of the mines which are too numerous to make detailed mention of in this report.

There have been three electrical plants installed and put into operation—one at the Glendale mine, one at the Chiefton mine and one at the Philippi mine, and there have been installed ten mining machines, of which 8 are electrical and 2 compressed air.

Several modern railroad tipples have been erected for the purpose of handling the product of the different mines.

During the year 9 new mines have been opened and put into operation. I am pleased to state that the coal business throughout my district is in a very prosperous condition. The miners and laborers are making good living wages and the prospects are very bright for the future. The only drawback we have in the district at present, is the scarcity of labor. At least 2,000 additional men could, with ease, find employment in this district.

HUTCHINSON MINE FIRE.

On the night of November 26th, 1898, the Hutchinson mine was discovered to be on fire at the bottom of the slope. I did not learn of the fire until the night of the 27th, whereupon, I went at once to the mine and found it to be in a very critical condition.

Upon my arrival, I found that Mr. Hutchinson had secured the assistance of many of the practical mine men in his region, and had endeavored to devise some plan of extinguishing the fire. They

concluded to seal the mine tight and attempt to extinguish the fire in that way. Upon my arrival I consulted with Mr. Hutchinson and the superintendent, and immediately took charge of the mine.

My first move was to get the pump in good working condition and to secure several hundred feet of three inch hose. I then had the fan started which exhausted the air and smoke from the mine.

After having opened up the slope mouth, we allowed several minutes to elapse before entering. We then proceeded down the slope with the hose and in a very few minutes had the fire under control. We found at the bottom of the slope that two or three hundred tons of roof had fallen. This fire is supposed to have originated from a grate which was used at the bottom of the slope for the benefit of the employes at that point.

MACK MANUFACTURING CO'S. FIRE CLAY MINE, at Penrith, Hancock County. On the 14thth of October, 1898, I made an inspection of this mine which is a shaft mine and has only one outlet for the miners to escape in case of any accident. I found the mine to be in a very dangerous condition, it not being safe to travel on the main headings. There were found twelve men employed in the mine and no air worthy of mention and for reason of the heavy blasting within the mine the powder smoke was so dense that it was with difficulty I was able to find my way through the mine.

Upon returning from the mine I sought the superintendent and advised him of the unsafe condition of the mine and requested him to take out the miners and not to permit men to work in the mine until the conditions had been improved. At this writing this mine is still idle.

You will please find below a list of the new mines that have been opened and put in operation from July 1st, 1898 to June 30th, 1899.

Marquet Coal Co. 3 mines at New Cumberland, Hancock County.

McElfresh Fire Clay Co. 1 mine at Penrith, Hancock County.

Briar Hill C. & C. Co., 1 mine at Luther, Marion County.

Monongah C. & C. Co., 2 mines at Monongah, Marion County.

Clark C. & C. Co., 1 mine at Highland, Marion County.

Bryan C. & C. Co., 1 mine at Everson, Marion County.

New York, C. & C. Co. 1 mine Simpson, at Taylor County.

Cumberland Coal Co., 1 mine at Albert, Tucker County.

Oakland C. & C. Co., 1 mine at Corinth, Preston County.

The Prichard mine belonging to the Clark C. & C. Co., Marion

County, was abandoned during the year. The following is a list of the mines that have not been in operation during the year:

Anrora mine owned by the Newburg Orrel C. & C. Co., Baltimore, Md.

LaBelle mine owned by the LaBelle Iron Co., Wheeling.

Riverside mine owned by the Riverside Iron Co., Wheeling.

Monongah No. 1 mine owned by the Monongah C. & C. Co., Monongah.

Adamston mine owned by the Adamston C. & C. Co., Clarksburg.

Gates mine owned by the Grafton C. & C. Co., Grafton.

Newburg Shaft mine owned by the Newburg C. & C. Co., Baltimore, Md.

Thomas No. 2 mine owned by the Davis C. & C. Co., Thomas

The following mines were visited during the year and found to be temporarily idle:

On June 16th the Sligo mine was visited and found to be idle caused by their brick plant not being in operation.

On June 16th the McElfresh mine was found idle owing to their tile plant being idle.

On June 18th the Tyrconnell mine was found idle. I have not been able to assign any cause for the same.

I do not think that a single company in this district fully complies with Section 11 of the Mining Laws in regard to the furnishing of timbers. As a general rule the companies do not furnish the miners with cap pieces. The props which they furnish the miners are from 15 to 18 inches longer than required in the working places and the miners saw this off and make use of this for cap pieces.

The miners do not comply with the section above in regard to placing their orders for timber a day in advance. They wait until they are in need of timber and then place a verbal order with the drivers and if the drivers fail to bring the timber immediately they are disposed to make complaint to the mine inspector.

I have made several investigations where miners have complained that the mining company did not supply them with timber and I have always found the miners to blame, for reason of their not giving the timbermen sufficient time to secure the timber. This delay in securing timber frequently results in a mine disaster in which men are injured and killed.

Yours very respectfully,

S. A. LEWIS,

Mine Inspector, 1st District.

SECOND DISTRICT,

Embracing the coal producing Counties of

Mason,
Putnam,
Wayne,
Clay,
KanawhaJerry Meade, Inspector,
Charleston, W. Va.

Charleston, W. Va.,
July 31st, 1899.Hon. James W. Paul,
Chief Mine Inspector,
Charleston, W. Va.

SIR:—I hereby submit for your consideration my annual report upon the condition of the mines in the Second mining district for the year ending June 30th, 1899. I am pleased to state that my official relations with the operators, superintendents, and mine bosses of the entire district have been cordial and pleasant. The general condition of all the mines in the district has been improved considerably during the past year and the production of nearly all increased.

I desire especially to call your attention to the large number of small mines in the district and to the number of men employed therein. For reason of their not coming within the purview of the law it is almost an impossibility to ascertain the production of these mines, and so far as presuming to offer suggestions relative to ventilation, drainage, timbering, etc., it is utterly useless. A number of accidents have happened at these small mines—one on August 14th in a mine on Two Mile Creek, Kanawha County, where a Mr. Haner was killed. Having seen a press notice of this accident I visited the mine and found it abandoned and was unable to secure details of the accident.

Such conditions as above outlined induce me to believe that it would be highly proper to endeavor to bring within the limits of the law all small mines.

There are in my district about 50 of these small mines employing 150 miners and producing about 550,000 bushels of coal per year.

These mines are distributed as follows:

Kanawha County	24	mines
Putnam “	6	“
Mason “	8	“
Cabell “	4	“
Wayne “	4	“
Clay “	4	“
	<hr/>	
	50	“

During the past year I visited 34 of these mines and found fully 90 per cent. of the mines having but one opening and practically no air suitable for respiration.

Some of the larger mines in the district are deficient in ventilation which is due largely to improperly constructed stoppings and the placing of break-throughs too far apart. I have seen rooms in some of the mines in the district driven 500 feet without a break-through, but I desire to state that I have in a great measure succeeded in having this system changed for the better, and while there might be much improvement in this line, it is difficult to get the miners to make the break-throughs for the reason, they claim, that they are not paid sufficient yardage. The miner in many instances will drive his room as far as possible without making a cross-cut for air, and rather than make the cross-cut he will quit the place and go elsewhere to work. I am pleased to say, however, that this condition exists at only a few of the mines in my district. Harmony has prevailed between the operators and miners during the year.

With but few exceptions the oil used in the district is a very poor quality of cotton seed which proves injurious to the health of the men employed inside of the mine. I would suggest that the oil used inside of the mines of the State be of a higher grade and that it be made subject to a rigid inspection.

Following is a list of mines abandoned and suspended during the year:

Dickinson at Malden, Kanawha County.

Cedar Grove seam at Mammoth, Kanawha County, Staunton Coal Co.

Coalburg No. 3, at Coalburg, Kanawha County, Robinson Coal Co.

Following is a list of mines opened during the year:

Cedar Grove seam at Crown Hill by Polsue Coal Co.

Cedar Grove seam at Belmont by Belmont Coal Co.

Cedar Grove seam at Black Cat by Kanawha Splint Coal Co.

Coalburg No. 4 reopened at Coalburg by Robinson Coal Co.

The following is a list of the commercial mines in the Second district, showing the number of mines operated by each company:

Putnam County	Mines.
---------------	--------

Marmet-Smith Coal Co	3
----------------------	---

Bancroft	1
----------	---

Carver Coal Co	1
----------------	---

Kanawha County	Mines.
----------------	--------

Elk River Coal & Coke Co	1
--------------------------	---

Elk River Coal & Mining Co	1
----------------------------	---

Falling Rock Cannell Coal Co	1
------------------------------	---

Campbell's Creek Coal Co	2
--------------------------	---

Quincy Coal Co	1
----------------	---

Peabody Coal Co	1
-----------------	---

Robinson Coal Co	3
------------------	---

Coalburg Colliery Co	1
----------------------	---

Stevens Coal Co	3
-----------------	---

Winifrede Coal Co	4
-------------------	---

Charlmore Coal Co	2
-------------------	---

Len's Creek Coal & Coke Co	1
----------------------------	---

Big Black Band Coal Co	2
------------------------	---

Victor Coal Co formerly the Monarch Coal Co	1
---	---

Big Mountain Coal & Mining Co	4
-------------------------------	---

Cannelton Coal Co	2
-------------------	---

Kelley's Creek Mining Co	7
--------------------------	---

Kanawha Splint Coal Co	1
------------------------	---

D Brannon, formerly McCallister Coal Co	1
---	---

Belmont Coal Co	4
-----------------	---

Montgomery Coal Co	2
--------------------	---

Chesapeake Mining Co	2
----------------------	---

Polsue Coal Co, formerly Crown Hill Coll. Co	3
--	---

Mason County	Mines.
--------------	--------

Hartford Salt & Coal Co	1
-------------------------	---

Camden Clay Co	1
----------------	---

Hope Salt & Coal Co	1
---------------------	---

Liverpool Salt & Coal Co	1
--------------------------	---

Consumers' Coal & Mining Co	1
-----------------------------	---

Mason City Mining Co	I
Beach Grove Coal Co	I
Harris Mine	I

During the year I made 205 visits to the commercial and 34 visits to small mines.

The table below exhibits the improvements made at the mines in the district during the year:

County.	Name of Company.	Improvements Made.		
		Furnace	Fan.	Fire Basket
Mason	Mason City Mining Company	1		
.....	Liverpool Salt & Coal Co	1		
.....	Beach Grove Coal Co.....	1		
Putnam.....	Marmet-Smith Coal and Mining Co	1		
Clay	Elk River Coal & Coke Co.....			1
Kanawha.....	Campbell's Creek Coal Co	1		
.....	Victor Coal Co	1		
.....	Cannelton Coal Co		1	
.....	Chesapeake Mining Co		1	
.....	Belmont Coal Co	1		
.....	Kelley's Creek Mining Co	2	2	
.....	Lens Creek Coal & Coke Co	1		
.....	Charlmore Coal Co	1		
.....	Robinson Coal Co	2		

In conclusion I desire to state that all suggestions made by me to the coal companies have in most cases been carried out though often they were quite slow in doing so. I further desire to thank you for the many courtesies extended to me during the past year.

Very truly yours,

JERRY MEADE,

Inspector Second district.

Montgomery, W. Va., June 30th, 1899.

Hon. James W. Paul,
Chief Mine Inspector,
Charleston, W. Va.

SIR:—I herewith respectfully submit to you my report of the Third Mining District for the year ending June 30th, 1899.

During the past year there has been a good deal of improvement made in and around the mines in this Third district, and the general condition of a majority of the collieries is, in many respects, very satisfactory. There are, however, a few exceptions which, while in some sections, they are all that can be desired, in others there is much room for improvement, and should the demand for the product of those mines improve as much during the incoming year as it has done in the year now closed, I have every confidence our operator will in the future, as they have in the past year, continue with the system of improvements which has, in a manner, inaugurated at all points, in the field, and in every department of their business.

It is very encouraging to note the following improvements, of a substantial character, that have been made at the various mines during the past year: Electric plants have been installed for hauling, mining and illuminating purposes, at the following mines: Boomer Branch, Betrys' South Caperton, Geendale, Rush Run, Red Ash, Slater and Macdonald. One rope haulage has been installed at the Quinnimont Big Que Mine and another is being installed at Alaska Mine, one 10 ton steam locomotive has been added to the Greenwood Coal Co's plant; compressor plants for mining purposes have been installed at Crescent, Longacre, and Rush Run Collieries; new fans for ventilating purposes have been installed at the Eagle, Edgewater, Crescent No. 1, Nuttallburg, Macdonald, Sugar Creek and Red Ash Mines and one is already on the ground and will be shortly installed at the Beechwood Mine.

Changes of various kinds, of a substantial nature, to reduce the cost and risk and increase the output, have been made at several collieries in the district. The Ballenger Coal Co., has built large holding bins at its mines. The Blume Coal Co., has also built large holding bins by which it has been enabled to dispense with the incline formerly used and now come out with the product of its mines,

level on to the dumps. The Laurel Creek Coal Co., has replaced its bins by larger ones and changed its system of transportation on its plane from the mine cars to that of a large monitor, changing its ropes, drum and all mechanical arrangements in connection therewith. At Longacre Colliery 36 Welch coke ovens have been completed and put into operation and arrangements made to build several more. At Brooklyn, 50 Beehive ovens are about completed. At Rush Run, 100 Beehive ovens are considerably advanced towards completion. At Macdonald, arrangements are now in progress to build at least 50 ovens in the immediate future.

Many new openings have been made at the various mines in operation for ventilation, drainage and increased capacity. The following new mines have been opened during the year by the following companies: Carver Brothers, Mecca Splint Coal No. 5, on Morris Creek, a tributary of the Gt. Kanawha River; W. R. Johnson, Crescent No. 1 Gas Coal Seam; The Masterson Mine, Sewell seam near Elmo, New River. At the above named new mines new and separate tipples have been built in every instance making them separate operations in addition to the ones already operated by these companies. There are several other mines now being opened up, namely the Thomas Coal Co's. Mine, Sewell seam near Elmo, New River, also the mines being opened at Kaymore on the South side of New River, near Fayette Station, by the Low Moor Co. and those at Arbuckle, by W. P. Rend & Co., near Thurmond, on the South side of New River. All of these new operations are situate in Fayette county and more are projected, as it is very currently reported that the White Oak Colliery Co. will commence, in the near future, operations on a large scale on Dunn Loop Creek. The C. & O. R. R. bridge across New River at Prince Station and the railroad up Piney Creek are being pushed very rapidly. This will, in a very short time, open up a very extensive coal field in Raleigh county.

During the past year, although prices for mining have not advanced any over the previous year, there has been a much greater volume of work and the men employed in and around the mines have been well employed. Hence the increased amount of wages has enabled them at every point in the district to improve their domestic arrangements and also, to indulge in any personal and social pleasures which under past conditions were beyond their reach.

We have been very fortunate in regard to strikes or labor troubles of any description, only two strikes worthy of notice having occurred; namely those at Rush Run on the South side of New River and Collins Colliery Co. on Dunn Loop Creek, both of which were adjusted with satisfaction after a short struggle. The object being to reduce the price of mining, which eventually failed, and let us hope the condition of affairs may continue such that this object may never be necessary in the future on the part of the employers of our working men. I feel justified in saying, notwithstanding the many assertions to the contrary by persons who are not sufficiently acquainted with our operators and the difficulties with which they have to contend in the various departments of their business, there are very few of them who do not have a desire to do the best they can for their employes, and have their families appear as respectable as circumstances will allow. It is only natural that every man who has capital invested should act as conservative as possible, not only for his own benefit, but also for that of his workmen and the inhabitants in general of the community in which he is located.

I regret to have to state that during the year we have had 31 fatal accidents, all of which were promptly attended to and properly investigated. This is slightly in excess of the previous year's fatalities but not by any means in proportion to the amount of coal produced. The large majority of those casualties or 28 of them occurred in the different sections of the New River field, and more particularly so in the eastern and southern portions. At first though this might impress the reader that in these sections of the field less ability and more carelessness existed in the management of the mines, but this is not so. There are two reasons why this condition of affairs exist. In the eastern and southern end of the field the seams are much thicker, the operations on a larger scale and more workmen are employed and the slate formation which overlies the seam and forms the roof is very irregular, varying in thickness from a few inches to several feet in the same mine, and at a number of places the sandstone formation above this slate comes down in rolls and cut the slate out and displaces it. This slate is not only soft and unreliable, but at all points in these sections of the field there exist what are known as kettle bottoms of all sizes and shapes in the roof. The coal seams are much nearer the surface in these sections and the roof contains more moisture which makes it doubly dangerous and it is from this cause more than any other that our accidents occur. In the lower or western end of New

River the coal seams are thinner and the roofing slate usually thick and uniform with fewer kettle bottoms existing therein and it is much more solid and reliable in every respect. The coal seams are also located near the foot of the mountains and have a much better cover over them.

In the different sections accidents have occurred in the following manner: In the mines on the main line of the C. & O., at the Central Mine, 2 white men whose ages were 30 and 35 years, one was blown up and burnt by striking a pick into a keg of powder and the other by jumping off of haulage while in motion; Echo Mine, one white man 30 years of age, by a fall of slate while turning a place off of the entry in a stump where the pillars were being robbed out, also one white man, 26 years of age, at Beechwood Mine, engaged in similar work; at Ballenger Mine, one colored man, age 30 years, at face of room while mining; Smokeless Mine, one colored man by rope haulage breaking and letting the cars run off; at Cliff Top Mine, one colored man, age 35 years, by a fall of draw slate at face of room while mining his cut. On the Dunn Loop Branch: At Harvey, one white and one colored man, ages 24 and 28 years, both of these men were killed at face of their rooms while in the act of mining, one by a piece of slate, which ought to have been taken down and the other by top coal falling on him; at Red Star, 2 colored men, ages 35 and 40, one by a fall of draw slate and the other by top coal at the face of rooms while mining; at the Collins Colliery Co., 1 white and 2 colored men, ages 30, 35 and 45, the white man was killed by a fall of slate at the face of his entry, one colored miner while taking off side-coal for the extension of rope haulage and the other by a fall of slate at the face of his place while robbing out pillars; at Sun Mine, one colored man, 25 years of age, crushed by riding on coal cars up the slope in direct disobedience to the Company's orders; at Dunn Loop Mine, 2 white men, ages 29 and 48, one of these was killed at the face of his entry by a small piece of slate falling and striking him on the head, breaking his neck, the other man by slate falling slantingly across the room between the timber, catching him while shoveling coal to the roadway; at Sugar Creek Mine, one white man, age 35, taking down slate during the night on main haulway for the purpose of extending rope haulage. On the South Side Branch: At Rush Run Mine, one white man, age 53, caught under slate he was taking down on main haulway, preparing the same for electrical haulage; at Red Ash^a Mine, one colored man, age 30, by cut of coal, which had been mined, falling

on him; at Cunard Mine, one white man, age 45, by fall of slate at the face of his place, caused by going back immediately after firing a shot which had knocked some posts out and he could not see the condition of the place for the powder smoke, and commenced to load his car. On Laurel Creek Branch; at the old Quinnimont Mine, one white man, age 45, by fall of slate. He had gone back forty-five feet from the face of his room and commenced to mine on the pillar without any permission or making any arrangements for his safety. At Big Que Mine, 2 colored men, ages 22 and 24, by fall of slate about eight feet wide turning air way off the entry; At Greenwood Mine, 3 colored men, ages 19, 26 and 35 years, one of these men was killed at the face of his entry by a curious shaped kettle bottom, the other two were killed in a place turning off of the entry about eight feet wide where the pillars were being robbed out; at the Robbins Mine, one colored man, age 28, by fall of slate or kettle bottom in a place that had been abandoned and he undertook to come out of the place in which he was working, without any authority and after having been told to keep away from this stump of coal he commenced to load a car of coal and while so doing was caught under a large piece of slate.

In the Kanawha section of this district the following accidents occurred: At the Edgewater Mine, 2 white men, ages 28 and 30, one man was driving a spike team on the main haulway and was walking by the side of his mules when the team was starting the loaded cars at the double parting inside of the mine. Though some cause he got his foot fast in the switch and the cars ran upon him before they could be stopped and injured him so severely that he died in a short time. The other man killed was working on the river tippie and was attending to the moving of the boats up and down the river as they were being loaded and by some means, of an unaccountable nature, became entangled in the pilot wheel used for this purpose, and was killed instantly. This man had been attending to this work for several years; at Longacre, one man, a carpenter, age 28 years, was killed by falling from a scaffold about 40 feet from the ground where he and others were putting in some new screens. He had assisted to put up the scaffold himself and had been warned by the other workmen to be careful as there was danger of falling. My object in describing these fatal accidents is that the general public may know how the accidents occur in and around the mines and what class of workmen are the unfortunate victims.

By referring to the ages of the men who have paid the penalty and who in almost every case were old and experienced miners, it will be seen that our inside mine managers cannot possibly give too much attention to the workmen entrusted to their care, neither can the workmen exercise too much caution, judgment and common sense in his own protection. It is the duty of every manager to see that the men working under him are amply supplied with the material necessary for their safety, and also, if needed, enact rules at his mine and enforce measures to compel them under all circumstances when danger of any kind appears to use this material and not allow them to take the unnecessary risks many miners are in the habit of taking in order to gain a few unimportant advantages. On several occasions during the past year when going my rounds, I have compelled miners to stop work and set posts or pull down loose slate where I found them working in danger. The excuse usually advanced was always about the same, that if the timber was set it would be in their way and be somewhat of a drawback to loading and mining the coal and that they did not think there was any danger until they had accomplished a certain piece of work. In this manner and under these conditions the bulk of our accidents happen. It is very true there are some cases where all the vigilance, human skill and judgment can possibly exercise, does not avert serious accidents, hence, it is all the more necessary that all parties in connection with the mining business should do their uttermost to avoid accidents. Aside from the misery they cause the families of the unfortunates they are a source of pain and annoyance to the owners and managers of the concern.

I have furthermore to regret that a source of annoyance and dissatisfaction exists in regard to the use, of that filthy and injurious illuminating compound known as blackstrap and kerosene oil, by drivers and other men employed by the day, and in some instances by the bank boss himself. While I feel at all times and under all circumstances in giving our operators all the credit to which they are justly entitled for business ability, their kindness and consideration to their workmen, their determined efforts to overcome any and all difficulties and build up the coal business of our district, I must say that some of them are committing an error of a grave character by allowing this practice to exist in their mines, and it would be appreciated not only by the Mine Inspector, but also by the best elements who constitute the mining population. If those of our mine operators, who allow the use of blackstrap in their

mines would use their best efforts to break up this filthy and injurious practice. As there is no law on our statute books whereby this can be reached it is only by their assistance that this undesirable practice can be stopped, and I sincerely hope they will take the matter under consideration and act as wisely and determinedly as they have in many other matters they have taken in hand and successfully carried through.

I desire to state that during the past year I have made 248 visits to the various mines for inspection and investigation purposes and my relations with all those with whom my official duty has brought me in contact have been pleasant. I have received from the officials and miners of the various concerns the most kind and considerate treatment for which I desire to return them, and also, yourself for your many advices during the year, my most sincere thanks.

Respectfully submitted,

EDWARD PINKNEY,

Inspector 3rd District,

State of West Virginia.

List of Mines in the Third District.
FAYETTE COUNTY.

Name of Company	No. of mines.	Seams Operated.		Post Office.	Location.
C. & O. R. R.	1				South Side.
Eureka Coal Co.	2	Gas No. 2	Splint No. 5	Montgomery	Kanawha R.
Mecca Coal Co.	1				Kanawha.
Coal Valley M. Co.	1	Gas No. 1			Kanawha R.
Crescent Coal Co.	3	Gas No. 2	Splint No. 5	Crescent	
Carver Brothers	1 (2)	"	"	Eagle	"
St. Clair Coal Co.	2	"	"	"	"
Vance Coal Co.	1	"	"	"	"
Diamond Coal Co.	1	"	"	Mount Carbon	"
Mt. Carbon Co. Ltd.	2	"	Splint No. 3	Powellton	"
Gt. Kanawha Coll. Co.	1	(2)	Splint No. 5	Mount Carbon	"
K. & M. R. R.	1				North Side
Longacre Coll. Co.	2	Gas No. 2		Longacre	Kanawha River.
Harewood Mini'g Co.	2	"	Splint No. 5	Harewood	"
Boomer C. & C. Co.	1	"		Boomer	"
C. & O. R. R.	1				
Greendale Coal Co.	1		Splint No. 1	Greendale	Ganley R.
Gaul'y' Mount'n C Co	3	(3)	"	Ansted	Rew River.
Deitz Coal Co.	1	Sewell		Gaymont	"
Sunnyide Coal Co.	1	"		Sunnyside	"
New River Coal Co.	1	"		Elmo	"
Masterson Coal Co.	1	"		"	"
Fayette C. & C. Co.	1	"		Fayette Station	"
Nuttallburg Coal Co	1	"		Nuttall	"
Kenney's Crk. C. Co.	1	"		"	"
Brown Coal Co.	1	"		South Nuttall	S. S. New River.
Boone Coal Co.	1	"		Boone	Kenney Creek.
Ballenger Coal Co.	2 (2)	"		"	"
Smokeless Coal Co.	1	Sewell		Winona	"
Rothwell Coal Co.	2 (2)	"		Nuttallburg	"
Blume Coal Co.	1	"		Winona	"
New River Coke Co.	2 (2)	Sewell		Caperton	N. & S. S. New R.
So. Caperton M. Co.	1	"		"	S. S. New River.
Fire Creek Coal Co.	1		Fire Creek	Fire Creek	New River
Central Coal Co.	1	"	"	"	"
Echo C. & C. Co.	2	Sewell	"	Berry	"
Dinnmoek Coal Co.	1	"	"	Thurmond	"
Stone Cliff Coal Co.	2	Sewell	"	Stone Cliff	"
Beechwood Coal Co.	1	"	"	Claremont	"
Alaska C. & C. Co.	1	"	"	"	"
Slater Coal Co.	1	"	"	Coit	"
Quinnimont Coal Co	1	"	"	Quinnimont	N. S. New River.
Robins Coal Co.	1	"	"	"	"
Laurel Creek C. Co.	1	"	"	"	"
Greenwood Coal Co	1	"	"	"	"
Longdale Iron Co.	1	Sewell		Sewell	"
Cunard Coal Co.	1	Sewell		Sewell	S. S. New River.
Brooklyn Coal Co.	1	"		Pinlow	"
Thurmond Coal Co.	1	"		Concho	"
Red Ash Coal Co.	1		Fire Creek	Fire Creek	"
Rush Run Coal Co.	1	"	"	Rush Run	"
Harvey Coal Co.	1	Sewell		Bissell	"
Red Star Coal Co.	1	"		Red Star	"
Collins Colliery Co.	2 (2)	"		Collinsville	"
Sim Coal Co.	1	"		Suit	"
Dunn Loop Coal Co.	2 (2)	"		Dunn Loop	"
Turkey Knob Co'l Co	1	"		Macdonald	"
Macdonald Coal Co.	1	"		"	"
C. & O. R. R.	1				
Sugar Crk. Coal Co.	1	Sewell		Macdonald	S. S. New River.

RALEIGH COUNTY.

Royal Coal Co.	1		Fire Creek	Prince	S. S. New River.
----------------	---	--	------------	--------	------------------

Total operations 80

Thomas Coal Co., grading sidetracks and opening up Sewell seam above Elmo.
W. P. Rend Coal Co., " " " " " two seams at Arbuckle.
Low Moor Iron Co., " " " " " Sewell seam on South Side at Fayette.

Coaldale, W. Va., Sept. 20th, 1899.

Hon. James W. Paul,
Chief Mine Inspector,
Charleston, W. Va.

SIR:—I have the honor to present to you for your consideration my annual report as Inspector of Mines for the Fourth District of West Virginia for the year ending June 30th, 1899.

I am pleased to state that the general condition of the mines is good in regard to drainage and ventilation. During the past year three new fans have been put in which leaves only one furnace in operation in the Flat Top field and a fan will be put in there as soon as a cross entry gets to the crop.

Regarding the accidents I have not the number of fatal and non-fatal accidents as I have forwarded all to your office. I am sorry to say it is too evident that many have been brought about by carelessness on the part of the victims themselves. On my visits to the Collieries I find men working in places which are not properly timbered and on investigation I find the props in the gob while the face of the workings was in a dangerous condition for the want of them.

While these conditions exist we will have accidents. If a strict discipline was enforced by all mine foremen many of these accidents would be prevented.

As the coal trade in this field is expanding a large per cent of unskilled labor is being employed in mining at present which increases the duties of the mine foreman.

There are two abuses of which I speak, that is the burning of mixed oils and the firing of shots at all hours. This entire field uses naked lights, but in most cases carbon oil or a cheap compound in the place of pure lard oil is used in the lamps. The result is that between the dense smoke of the oil used and the firing of shots the first thing in the morning often unfits their places for work. When the miner makes his mining and bores his holes and leaves it till morning to fire he does an injustice to his fellow man which is often done in this field.

Yours respectfully,
WM. J. PREECE,
Mine Inspector, 4th District.

Directory of Mines and Conditions in which they were found upon their inspection, as reported by the District Mine Inspectors.

The following tabulation gives the directory of the mines in the state and the condition in which they were found upon being inspected by the district mine inspectors and as reported monthly to the office of the Chief Mine Inspector. The details of the record of inspections made are on file in the office of the Chief Mine Inspector and may at any time be seen upon request of any citizen of the state.

The condition of the mines is reported as GOOD, FAIR or BAD

1. Wherein a mine is found to comply with the requirements of the law it is classified as in good condition.

2. Wherein a mine has good ventilation, poor drainage, good timbering, muddy roads, such as to render the mine healthful but slightly dangerous, it is classified as in fair condition.

3. Insufficient ventilation, wet roads upon which miners have to travel, leaky stoppings and lack of timbering are sufficient to classify a mine as in bad condition.

In the column after the classification will be found wherein the mine is deficient.

Where reference is made in the column stating wherein the mine is found deficient reference is had by "M. L. Sec.," which refers to Mine Laws sections. The mine law may be found in the rear of this volume and operators are respectfully referred to it.

CONDITION OF THE MINES FOR THE YEAR
ENDING JUNE 30, 1899.

Condition in which the mines were found upon inspections made for the year ending June 30, 1899, first mining district, S. A. Lewis, inspector.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in.
1	Barbour	Junior	Junior Coal Co.	Fair.	Ventilation.
2		Kelley	Philippi Coal Co.	Good	
3		South Arden	South Arden Coal Co.	Good	
4	Brooke	Blanche	Panhandle Coal Co.	Good	
5		Gilchrist	Gilchrist Coal Co.	Good	
6		Wellsburg	J. W. M. Carmichael	Good	
7	Hancock	Sligo	Mack Manufacturing Co.	Good	
8		Marquet	Marquet Coal Co.	Good	
9		McElfresh	McElfresh Clay Mfg. Co.	Bad	2nd outlet & ventilation
10	Harrison	Bingamon	Bingamon Coal & Coke Co.	Fair.	Distribution of air.
11		Worthington No. 2	Worthington C. & C. Co.	Good	
12		Farnum	Globe Coal & Coke Co.	Good	
13		Fall Run No. 2	Pinnickinnick Coal Co.	Fair.	Ventilation.
14		Jackson No. 1	Pinnickinnick Coal Co.	Good	
15		Briar Hill No. 3	Briar Hill C. & C. Co.	Good	
15 A		Briar Hill No. 1	Briar Hill C. & C. Co.	Good	
16		Glen Falls	Glen Falls Coal & C. Co.	Good	
17		Howard	Howard Coal & Coke Co.	Good	
18		Despard No. 2	Despard Gas Coal Co.	Fair.	Ventilation.
19		Mt. Clare	Mt. Clare Coal & Coke Co.	Fair.	Ventilation.
20		Jackson No. 1	Findlay & Co.	Good	
21		Wolf Summit	Hogsett, Plattford & Seattin	Good	
22	Marion	New England	W. Fairmont C. & C. Co.	Good	
23		W. Fairmont Shaft	W. Fairmont C. & C. Co.	Good	
24		Gaston	Gaston Gas Coal Co.	Good	
25		Montana	Montana Coal & Coke Co.	Good	
26		Mason	Mason Coal & Coke Co.	Good	
27		Briar Hill No. 2	Briar Hill Coal & Coke Co.	Good	
28		King	Va. & Pittsburg C. & C. Co.	Good	
29		Monongah No. 2	Monongah Coal & Coke Co.	Good	
30		Monongah No. 3	Monongah Coal & Coke Co.	Good	
31		Middleton	Monongah Coal & Coke Co.	Good	
32		P'ch'd & And'r's'n	Clark Coal & Coke Co.	Good	
33		Chiefton	J. A. Clark Coal & Coke Co.	Good	
34		Bryan	Bryan Coal & Coke Co.	Bad	Ventilation.
35		Worthington No. 1	Worthington C. & C. Co.	Fair.	Ventilation.
36		Highland	Highland Coal & Coke Co.	Good	
36 A		Middleton	Monongah Coal & Coke Co.	Fair.	Ventilation.
36 B		O'Donald	Palatine Coal Co.	Good	
37	Marshall	Boggs Run	Boggs Run M. & Mfg. Co.	Good	
38		Benwood Mill	Wheeling Steel & Iron Co.	Good	
39		Glendale Shaft	Glendale Coal Co.	Fair.	Ventilation.
40		Moundsville Shaft	Moundsville Coal Co.	Good	See mine law sec 6, 8 & 13
41	Mineral	Klondike	Davis Coal & Coke Co.	Good	
42		Hampshire	Davis Coal & Coke Co.	Good	
43		Savage	Davis Coal & Coke Co.	Good	
44		Gas (Hampshire)	Davis Coal & Coke Co.	Good	
44 A		Hampshire 6 ft.	Davis Coal & Coke Co.	Good	
45		Windom Big Vein	Davis Coal & Coke Co.	Fair.	Drainage.
46		Elk Garden No. 6	W. Va. & Pittsburg R. R. Co.	Good	
47		Elk Garden No. 7	W. Va. & Pittsburg R. R. Co.	Fair.	
48	Monongalia	Opekiska	Opekiska Coal & Coke Co.	Good	
49		Beechwood	Patterson-Reisner C. & C. Co.	Good	
50	Ohio	Man. & Whit.	T. E. Kasley & Son	Fair.	Ventilation & drainage.
51		Richland	Richland Coal Works	Good	
52		Yochum	Yochum Coal Co.	Good	
53		Elm Grove Shaft	Elm Grove Coal Co.	Fair.	Ventilation & machin'ry
54	Preston	Austin	Austin Coke Works	Fair.	Ventilation.
55		West End	U. N. Orr Coal & Coke Co.	Good	
56		Tunnelton	Merchants Coal Co.	Good	

Directory mines, names of coal beds, kind of ventilation and total number of all kinds of inside employes for the year ending June 30, 1899.

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked.		Kind of Ventilation.	Tot'l inside employes	ON
			Thickness.				
			Name.	Ft. In.			
R. G. Haskins.....	W. A. Cox	Elkins.....	Freeport	5-6	Furn	68	1
G. W. Wilson .....	.....	Philippi.....	Up. Freeport	6	Furn	6	2
Geo. C. Lee .....	.....	Arden	Up. Freeport	6	Furn	.....	3
Leo. Smith.....	Thos. Ritson.....	Standard	No. 7	1-6	Furn	53	4
A. Gilchrist	Wm. Gilchrist.....	Lazearville.....	Pittsburg	5-6	Furn	35	5
J. W. M. Carmichael	Posey Cheek	Wellsburg	Pittsburg	5	Furn	19	6
Fitz Simons.....	.....	New Cumberland .....	.....	.....	.....	.....	7
Oscar L. Marquet	Wilson Holmes	New Cumberland	Pittsburg	1-6	Nat	13	8
Benton Lankford.....	Samuel Glazer.....	New Cumberland	Pittsburg	3-5	Stack	7	9
F. W. McIntire	F. W. Freeman.....	Fairmont.....	Pittsburg	8-6	Stack	36	10
John F. Bratt	O. Gandy	Fairmont.....	Pittsburg	8	Furn	10	11
R. W. Affleck	James Craig	Farnum	Pittsburg	9	Furn	.....	12
John H. Clifford	Frank Flaherty.....	Clarksburg	Pittsburg	9	Furn	73	13
John H. Clifford.....	M. M. Mannix	Clarksburg	Pittsburg	9	Furn	80	14
C. W. Watson	Harry Toothman.....	Fairmont.....	Pittsburg	8	Fan	58	15
C. W. Watson	Patrick McAndrew	Fairmont.....	Pittsburg	8	Furn	48	15a
J. F. Jones	Chas. Vickers	Clarksburg	Pittsburg	9	Furn	48	16
John Temple	John Temple	Wilsonburg	Pittsburg	6to8	Furn	22	17
Ward Lewis	J. W. Latstetter.....	Clarksburg	Pittsburg	9	Shaft	31	18
J. H. Hanson	Lee Mitchell.....	Mt. Clare	Pittsburg	8	Shaft	21	19
C. O. Findley .....	.....	Clarksburg	Pittsburg	7	Nat	8	20
.....	.....	Uniontown Pa. ....	.....	.....	.....	.....	21
W. B. Brooks	S. C. Wallace	Fairmont.....	Pittsburg	8-6	Fan	107	22
W. B. Brooks	J. J. Brennen	Fairmont.....	Pittsburg	8-6	Fan	176	23
G. L. Watson	G. B. Brown	Fairmont.....	Pittsburg	8-6	Fan	198	24
J. C. Gaskill	C. E. Gaskill	Fairmont.....	Pittsburg	7	Fan	220	25
A. B. McDonald	P. B. Robinson	Fairmont.....	Pittsburg	9	Fan	50	26
C. W. Watson	Harry Bainbridge	Fairmont.....	Pittsburg	8	Fan	90	27
R. M. Hite	R. M. Hite	Fairmont.....	Pittsburg	8-6	Fan	18	28
A. J. Ruckman	A. E. Reppert	Monongah	Pittsburg	8	Fan	252	29
A. J. Ruckman	A. E. Reppert	Monongah	Pittsburg	8	Fan	211	30
.....	.....	Monongah .....	.....	.....	.....	.....	31
Thos. S. Haymond.....	John Prunty	Fairmont.....	Pittsburg	8	Fan	69	32
F. W. McIntire	Chas. Brooks	Fairmont.....	Pittsburg	8	Fan	85	33
W. F. Shafer	W. E. McGlone	Everson .....	.....	.....	.....	.....	31
John E. Bratt	Geo. Cook	Fairmont.....	Pittsburg	8	Fan	70	35
J. H. Wheelwright.....	P. Laughery	Monongah	Pittsburg	8	Furn	31	36
A. J. Ruckman	James Abercrombia	Monongah	Pittsburg	8	Furn	25	36a
M. D. Orr	J. C. McKinney	Fairmont.....	Pittsburg .....	.....	Nat	30	36b
Philip Kunz.....	Eugene Miller	Wheeling	Pittsburg	5-6	Fan	46	37
.....	Henry Riddle	Benwood	Pittsburg	6	Furn	25	38
J. E. Wallace	J. E. Wallace	Glendale	Pittsburg	6	Fan	113	39
John W. Berry	E. C. Pickett	Moundsville	Pittsburg	6	Fan	92	40
O. Tibbets	J. B. Rankin.....	Cumberland Md.	Pittsburg .....	.....	.....	.....	41
O. Tibbets	John Rowland.....	Cumberland Md.	6 Ft.	5-6	Fan	56	42
O. Tibbets	Peter Messenger.....	Cumberland Md.	4 Ft.	3-6	Fan	93	43
O. Tibbets	J. B. Rankin.....	Cumberland Md.	Tyson	5-6	Fan	65	44
O. Tibbets	John Rowland.....	Savage, W. Va	6 Ft.	5-6	Fan	50	44a
O. Tibbets	J. B. Rankin.....	Cumberland Md.	Pittsburg	12	Nat	15	45
W. T. Blackiston.....	Foster Wilson	Elk Garden	Pittsburg	14	Nat	210	46
W. T. Blackiston.....	Foster Wilson	Elk Garden	Pittsburg .....	.....	Nat	.....	47
.....	Micah'l Callingham	Opekiska	Pittsburg	7	Nat	35	48
R. I. Patterson	Wm. Reid	Beechwood	Pittsburg	7	Furn	41	49
W. H. Kasley	Wm. Magruder.....	Wheeling	Pittsburg	5	Fan	19	50
John P. Gilchrist	John Aiken	Wheeling	Pittsburg	5	Furn	61	51
John Yochum	John Yochum	Wheeling	Pittsburg	4-8	Furn	7	52
J. B. Chambers	Jack Costellow	Elm Grove	Pittsburg	5-6	Fan	67	53
Geo. C. Shaw	J. M. Whittaker.....	Austin	Lo. Freeport	4-8	Fan	55	54
J. M. Orr	R. L. Larew	Tunnelton	Up. Freeport	4-8	Nat	31	55
A. J. Bonafield	Geo. Cummings.....	Tunnelton	Freeport	4-9	Furn	165	56

Condition in which the mines were found upon inspections made for the year ending June 30, 1899, first mining district, S. A. Lewis, inspector.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in.
57	Preston....	Irona.....	F. C. Dodd, Esq.	Bad..	Ventilation.
58	"	Oakland	Oakland Coal & Coke Co..	Good	
59	Taylor.....	Fahey.....	Grafton Coal & Coke Co...	Fair..	
59A	"	Sandlick	Grafton Coal & Coke Co..	Good	
60	"	Flemington.....	Flemington C. & C. Co.	Good	
61	"	Tyrconnell	John H. Henry, Esq. Lessor	Good	
62	"	Simpson.....	New York C. & C. Co.	Fair..	Ventilation.
64	Tucker....	Douglas Nos. 1 & 2	Cumberland Coal Co.....	Good	
65	"	Douglas No. 3.	Cumberland Coal Co.	Fair..	Ventilation.
67	"	Thomas Shaft ...	Davis Coal & Coke Co.	Fair..	Ventilation.
68	"	Thomas Drift.	Davis Coal & Coke Co.	Good	
69	"	Coketon No. 1.	Davis Coal & Coke Co.	Bad..	Ventilation.
70	"	Coketon No. 2.	Davis Coal & Coke Co.	Good	
71	"	Coketon No. 3.	Davis Coal & Coke Co.	Good	
258	Randolph..	Randolph.....	Randolph Coal Co.	Good	

Directory of Mines, names of coal beds, kind of ventilation and total number of all kinds of inside employees for the year ending June 30, 1899.

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked		Kind of Ventilation.	Tot'l inside employees	ON
			Thickness.				
			Name.	Ft. In.			
F. C. Todd	John Henry	Kingwood...	Freeport	4-9	Nat..	62	57
R. I. Anderson	Lee Hill	Corinth	Up. Freeport	4	Nat..	21	58
John W. Fahey.....	L. W. Donahue.....	Grafton	Pittsburg	8	Nat..	73	59
John W. Fahey.....	W. J. Philipps	Grafton	Pittsburg	7	Nat..	29	59a
James Stirrat.....	John McDonald	Flemington	Pittsburg	8 to 12	Fan ..	150	60
J. H. Henry	Robt. Love	Tyrconnell	Pittsburg	8	Nat..	59	61
L. B. Brydon.....	W. M. Drainer	Simpson	Pittsburg	7-6	Bask.	68	62
J. B. Jenkins.....	Geo. Jenkins.....	Albert	Davis	6-5	Fan ..	160	64
J. B. Jenkins.....	Geo. Jenkins.....	Albert	Davis.....	6-5	Fan ..	.....	65
Lee Ott	Jas. Carter	Thomas	Davis.....	6	Fan ..	139	67
Lee Ott	Wm. Barrick	Thomas	Davis.....	8	Fan ..	427	68
John C. Brydon	A. G. Smith	Coketon	Davis.....	6	Shaft	42	69
John C. Brydon	A. G. Smith	Coketon	Davis.....	3-6	Fan ..	162	70
John C. Brydon	C. H. Bell	Coketon	Davis	6	Fan ..	204	71
F. P. Rease	R. D. Edwards.....	Belington	Up Freeport	9	Shaft	35	258

Condition in which the mines were found upon inspections made for the year ending June 30, 1899, second district, Jerry Meade, inspector.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in
72	Kanawha..	Blythe	John B. Carson, Esq.	Bad..	M. L. Secs. 5, 6 and 9.
73		Falling Rock	Falling Rock Cannel C Co ..	Fair..	Drainage.
74		Graham	T. J. Mason	Bad..	M. L. Secs. 5, 9 and 10.
75		New Mine	Campbell's Creek Coal Co ..	Fair..	Ventilation.
76		Spring Fork	Campbell's Creek Coal Co ..	Fair..	Ventilation.
77		Black Diamond..	Black Diamond Mining Co ..	Fair..	Ventilation.
78		Quincy	Quincy Coal Co	Fair..	M. L. Secs. 6 and 10.
79		Peabody	Peabody Coal Co	Fair..	Ventilation.
80		Monarch	Victor Coal Co	Bad..	Maps and Ventilation.
81		Virginia	Virginia Mining Co	Fair..	Ventilation.
82		Schoofly	Big Mountain Mining Co ..	Fair..	M. L. Secs. 6 and 10.
83		Sunflower	Big Mountain Mining Co ..	Fair..	Second opening.
84		Coalburg	Big Mountain Mining Co ..	Bad..	Ventilation.
85		B. No. 1	Kelly's Creek Mining Co ..	Fair..	M. L. Secs. 5 and 10.
86		D. No. 4 & No. 2.	Kelly's Creek Mining Co ..	Fair..	M. L. Secs. 5 and 10.
87		C. No. 2 & No. 3.	Kelly's Creek Mining Co ..	Fair..	M. L. Secs. 5 and 10.
88		A. No. 1	Kelly's Creek Mining Co ..	Fair..	M. L. Secs. 5 and 10.
89		Riverside	Riverside Coal Co	Good	
90		Cannelton Cannel	Cannelton Coal Co		
91		Kanawha Gas	Cannelton Coal Co	Bad..	Ventilation.
92		Charlmore	Charlmore Coal Co	Good	M. L. Secs. 5 and 6.
93		Brabbin	Brabbin Coal Co	Fair..	M. L. Secs. 5 and 10.
94		Len's Creek	Len's Creek Coal Co	Good.	
95		Atherton	Big Black Band Coal Co ..	Fair..	M. L. Secs. 6 and 10.
96		North	Winifrede Coal Co	Fair..	Ventilation.
97		South	Winifrede Coal Co	Good	
98		Ronda	Coalburg Colliery Co	Fair..	Ventilation.
99		Key-stone	Stevens Coal Co	Good	
100		Acme	Stevens Coal Co	Bad..	Ventilation.
101		Coalburg	Robinson Coal Co	Fair..	M. L. Secs. 5, 6 and 10.
102		Cedar Grove	Robinson Coal Co	Bad..	M. L. Secs. 5, 6 and 10.
103		Chestnut Point..	Brannon Coal Co	Fair..	M. L. Sec. 6.
105		Black Cat	Kanawha Splint Coal Co ..	Bad..	M. L. Secs. 5, 6 and 10.
106		Kanawha	Belmont Coal Co	Fair..	M. L. Secs. 5 and 6.
107		Belmont	Belmont Coal Co	Fair..	M. L. Secs. 5 and 10.
108		Lewiston	Belmont Coal Co	Fair..	M. L. Secs. 5 and 10.
109		Crown Hill	Polsue Coal Co	Fair..	M. L. Secs. 5 and 10.
110		Cedar Grove	Polsue Coal Co	Fair..	Maps.
112		Chesapeake No. 1	Chesapeake Mining Co ..	Fair..	M. L. Secs. 5 and 10.
113		Chesapeake No. 2	Chesapeake Mining Co ..	Bad..	M. L. Secs. 5, 9 and 10...
114		Consolidated	Montgomery Coal Co	Fair..	M. L. Secs. 5 and 10.
115		Mt Morris	Montgomery Coal Co	Fair..	M. L. Secs. 5 and 10.
116	Mason ..	Camden	Camden Clay Co	Fair..	Mine map.
117		Beach Grove	Beech Grove Coal Co	Fair..	M. L. Sec. 5 and 6.
118		Hope	Hope Salt and Coal Co	Fair..	Mine, Map & ventilation
119		McDaniel	Maso City Mining Co	Fair..	M. L. Secs. 5 and 10.
120		Liverpool	Liverpool Salt & Coal Co ..	Fair..	M. L. Secs. 5, 6, 9 and 10.
121		Hartford	Hartford Salt & Coal Co ..	Fair..	Ventilation & drainage
122		New Haven	Consumers C. & M. Co	Bad..	M. L. Secs. 6 and 10.
123	Putnam..	Plymouth	Carver Coal Co	Fair..	M. L. Secs. 6 and 10.
124		Florence	Marmet-Smith C. & M. Co ..	Fair..	M. L. Secs. 9 and 10.
125		Poentafico	Marmet-Smith C. & M. Co ..	Bad..	Ventilation.

Directory mines, names of coal beds, kind of ventilation and total number of all kinds of inside employes for the year ending June 30, 1899.

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked.		Kind of Ventilation	Total inside employes	Total on
			Thickness.				
			Name.	Ft. In.			
	J. W. Carson	Charleston	Snyder	3-8	Shaft	72	
L. W. Couch	N. C. Poston	Jordan	Up. Mahone	2-6	Fan	25	73
T. J. Mason	C. C. Wertz	Charleston	6 Ft	6	Shaft	28	74
J. E. Dana	W. B. Calderwood	Malden	Campb. Cr.	4to6	Fan	173	75
J. E. Dana	W. B. Calderwood	Malden	Campb. Cr.	3to5	Furn	107	76
Samuel Moore	James Hennings	Diamond	Winifrede	3-5	Nat.	40	77
Wm. Dickinson	J. M. Kelly	Malden	Blk Diam'nd	3-2	H. air	14	78
J. A. Canter	J. J. Neylon	Shrewsbury	Big Seam	6to7	Nat	72	79
J. C. Johnson	Henry Tucker	Monarch	Cedar Grove	3	Furn	55	80
Henry Davis	Jas. A. Senes	Cedar Grove	Cedar Grove	3-2	Fan	50	81
Henry Davis	James Morgan	Cedar Grove		4-8	Furn	33	82
Henry Davis	James Morgan	Cedar Grove		4-8	Furn	12	83
Henry Davis	James Morgan	Cedar Grove	Coalburg	4-8	Furn	47	84
A. C. Finley	W. H. Mease	Mammoth	Coalburg	5	Furn	67	85
A. C. Finley	D. W. Stone	Mammoth	Cl' b'rg & No5	5-6	F & N	28	86
A. C. Finley	J. M. Davis	Mammoth	No5 & L' wstn	5 & 6	Fan	81	87
A. C. Finley	W. H. Mease	Mammoth	Cedar Grove	3			88
H. G. Burds	D. B. Howenry	Riverside	Cedar Grove	3	Fan	115	89
Langdon Lea	Robert Taylor	Cannelton	Cannel	1	Nat	79	90
Langdon Lea	Robert Taylor	Cannelton	No. 2	6-11	Fan	120	91
H. B. Clarkson	H. King	Hernshaw	Lens Creek	3-4	Furn	52	92
L. N. Perry	R. Brabbin, Jr.	Hernshaw	Lens Creek	3-4	Furn	15	93
M. O. Brooks	J. W. Noble	Hernshaw	Carkin	3-7	Furn	60	94
A. M. Woolridge	L. W. Pryor	Hernshaw	Black Band	3-7	Furn	90	95
R. B. Cassidy	James Yowell	Winifrede	Winifrede	5	Fan	341	96
R. B. Cassidy	James Yowell	Winifrede	Winifrede	5	Fan		97
J. W. Moore	A. P. Crawford	Ronda	Coalburg	5to7	Furn	85	98
R. G. Vance	J. S. Holmes	Acme	Lo Kittan	5-6	Fan	73	99
R. G. Vance	W. H. Morris	Acme	Up. Freeport	1-6	Fan	57	100
Arthur Robinson	R. G. Puff	Coalburg	Coalburg	3-10	Furn	88	101
Arthur Robinson	James Murray	Coalburg	Cedar Grove	3	Furn	17	102
D. Brannon	P. L. Brannon	East Bank	Cedar Groce	3	Furn	28	104
E. E. Lair	D. B. Howery	East Bank	Lewiston	1	Furn	75	105
T. E. Embleton	P. H. Embleton	Crown Hill	Kanawha		Nat.		106
T. E. Embleton	P. H. Embleton	Crown Hill	Coalburg	1	Nat.	110	107
T. E. Embleton	P. H. Embleton	Crown Hill	Lewiston	4-8	Nat		108
Ed Polsne	J. Nugen	Crown Hill	Kanawha	4	Nat.	29	109
Ed Polsne	J. Nugen	Crown Hill	Cedar Grove	2-10	Nat.		110
J. B. Lewis	Alex Thompson	Handley	Kanawha	3-8	Fan	189	112
J. B. Lewis	Alex Thompson	Handley	Winifrede	6-6	Fan		113
S. H. Montgomery	Wm. Tamplin	Montgomery	Kanawha	4	Fan	50	114
S. H. Montgomery	Wm. Tamplin	Montgomery	Kanawha	4	Nat.	40	115
M. G. Tyler	J. E. Armstrong	Spilmau	Pittsburg	1	Furn	10	116
J. F. Icenhower	Harry Hart	Mason	Pittsburg	1-4	Shaft	3	117
D. C. Davis	Henry Williams	Mason	Pittsburg	1-8	Furn	23	118
G. H. Gress	W. J. Harris	Mason	Ohio River	4-6	Furn	11	119
E. A. Smith	Sam Edwards	Hartford	Pittsburg	1-6	Furn	20	120
D. E. Newton	Richard Jenkins	Hartford	Pittsburg	1-6	Fan	27	121
H. L. Roush	R. A. Grinstead	New Haven	Pittsburg	4-6	Fan	85	122
W. A. Carver	James Carver	Plymoth	Plymouth	6	Fan	170	123
Edw'd Schonebaum	Lewis Travillion	Raymond City	Pittsburg	5-6	Fan	197	124
Edw'd Schonebaum	John C. Childs	Raymond City			Furn		125

Condition in which the mines were found upon inspections made for the year ending June 30, 1899, third district, Edward Pinkney, inspector.

No.	County.	Name of Mine.	Name of Operator	Condition of Mine	Deficient in.
126	Fayette	Longacre	Longacre Colliery Co.	Good	
127		Black No. 5.	W. R. Johnson & Co.	Fair.	Drainage.
128		Gas No. 2.	W. R. Johnson & Co.	Fair.	Drainage.
129		Boomer	Boomer Coal & Coke Co.	Good	
130		Eureka Gas No. 2	M. T. Davis & Co.	Good	Ventilation.
131		Black No. 5.	M. T. Davis & Co.	Good	
132		Mecca	Mecca Coal & Coke.	Good	
133		Straghan	Coal Valley Mining Co.	Good	
139		Edgewater No. 1.	Carver Brothers.	Fair	Ventilation & drainage
140		Eagle	Carver Brothers.	Fair	M. L. Secs. 9 & 11.
141		Edgewater No. 2.	Carver Brothers.	Fair	Ventilation & drainage
142		Edgewater No. 5.	Carver Brothers.	Good	
143		St. Clair No. 2	The St. Clair Co.	Good	M. L. Sec. 9.
144		St. Clair No. 1.	The St. Clair Co.	Good	M. L. Sec. 9.
145		Forest Hill	Vance C. Co T P Davies Rec	Good	
146		Diamond	Diamond Coal Co.	Good	M. L. Sec. 9.
147		Crescent Gas No. 2	W. R. Johnson	Fair	Ventilation.
148		Crescent No. 5 Blk	W. R. Johnson	Fair	Drainage.
149		Crescent No. 1	W. R. Johnson	Fair	Ventilation.
150		Excelsior	Mt. Carbon Co. Limited	Good	
151		Vulcan	Mt. Carbon Co. Ltd	Good	
152		No. 1 Gas.	Gt. Kanawha Col'y Co Ltd	Good	M. L. Sec. 9.
153		Digby	Gt. Kanawha Col'y Co Ltd	Fair	Drainage.
155		Ganley Mountain.	Ganley Mountain Coal Co	Good	
156		Gaymont	Deitz Coal & Co Coke.	Good	
157		Sunnyside	Sunnyside Coal & Coke Co	Fair	M. L. Secs. 9 & 11.
158		Elmo	New River Mining Co	Bad.	M. L. Secs. 9 & 11.
159		Masterson	Masterson Coal Co.		
160		Fayette	Fayette Coal & Coke Co.	Good	
161		Nuttallburg	Nuttallburg C. & C. Co.	Fair	Ventilation.
162		Keeney's Creek	Nuttallburg C. & C. Co.	Good	
164		Brown	Brown Coal Co.	Good	
165		Boone	Boone Coal & Coke Co.	Fair	Ventilation.
166		Ballinger No. 2	Ballinger C. & C. Co.	Good	
167		Ballinger No. 1	Ballinger C. & C. Co.	Good	
168		Blume	Blume Coal & Coke Co.	Good	
169		Smokeless	Smokeless Coal & Coke Co	Fair	Drainage.
170		Dubree	Rothwell Coal & Coke	Fair	Ventilation.
171		Quarrier	Rothwell Coal & Coke Co	Fair	Ventilation.
172		South Caperton	So. Caperton Minging Co	Good	
173		South Side	New River Coke Co.	Bad.	Drainage.
174		North Side	New River Coke Co	Fair	M. L. Sec. 9.
175		Cliff Top	Longdale Iron Co.	Good	
176		Cunard	Cunard Coal Co.	Good	
177		Brooklyn	Brooklyn Coal Co.	Good	
178		Fire Creek	Fire Creek C. & C. Co.	Fair	M. L. Secs. 9 & 10.
179		Central	Central Coal Co.	Good	M. L. Sec. 9.
180		Echo	Echo Coal & Coke Co.	Good	M. L. Sec. 9.
181		Red Ash	Red Ash Coal Co.	Good	
182		Rush Run	Rush Run Coal & Coke Co	Good	M. L. Sec. 9.
183		Thurmond	The Thurmond Coal Co.	Good	
184		Stone Cliff	Buery Coal & Coke Co.	Fair	M. L. Secs. 9, 10 and 11
185		Dimmock	Dimmock Coal & Coke Co	Fair	M. L. Secs. 9 & 11.
186		Beech'd&Keyst'ne	Beech'd Coal & Coke Co	Fair	M. L. Secs. 9 & 10.
187		Alaska	Alaska Coal & Coke Co.	Fair	M. L. Secs. 10 & 11.
188		Slater	Slater Coal Co.	Fair	M. L. Sec. 9.
189		Harvey Nos. 1 & 2	Harvey Coal & Coke Co.	Fair	M. L. Sec. 9.
190		Star	Star Coal & Coke Co.	Good	
191		Collins Nos. 1 & 2	Collins Colliery Co.	Good	M. L. Sec. 9.
192		Sun	Sun Coal & Coke Co.	Good	
193		Dunloop No. 1	Dunloop Coal & Coke Co.	Fair	M. L. Secs. 10 & 11.
194		Dunloop No. 2	Dunloop Coal & Coke Co.	Fair	M. L. Secs. 10 & 11.
195		Turkey Knob	Turkey Knob Coal Co.	Good	
196		Macdonald	MacDonald Colliery Co.	Fair	Drainage.
197		Sugar Creek	Sugar Creek C. & C. Co.	Fair	Drainage.
198		Old Mine	Quinnimont Coal Co.	Good	M. L. Secs. 9 & 11.
199		Big "Q"	Quinnimont Coal Co.	Good	M. L. Sec. 9.
200		Robins	Robins Coal Co.	Bad.	Drainage.

Directory of mines, names of coal beds, kind of ventilation and total number of all kinds of inside employes for the year ending June 30, 1899.

Name of Superintendent.	Name of Mine Boss.	Post Office	Coal Bed Worked.		Kind of Ventilation.	Tot'l inside employees	No.
			Thickness				
			Name.	Ft. In.			
F. F. Dixon.....	Weyman Hunt.....	Longacre.....	Eagle Gas.....	5	Nat.....	74	126
W. T. Leavell.....	K. Akers.....	Harewood.....	Block No. 5.....	4-8	Furn.....	29	127
W. T. Leavell.....	Kemper Akers.....	Harewood.....	Gas No. 2.....	5to6	Furn.....	7	128
Edward W. Cox.....	Edward Littlejohn.....	Mt. Carbon.....	Gas No. 2.....	6	Fan.....	85	129
M. T. Davis.....	Geo. Fraser.....	Montgomery.....	No. 2.....	5	Fan.....	50	130
M. T. Davis.....	Geo. Fraser.....	Montgomery.....	No. 5.....	6	Furn.....	33	131
John Carver.....	John H. Tasker.....	Montgomery.....	Gas No. 2.....	4-6	Fans.....	90	132
John W. Straughan.....	Geo. Hilton.....	Montgomery.....	Eagle.....	3-10	Furn.....	29	131
Enoch Carver.....	W. H. Thompson.....	Eagle.....	Gas.....	4	Fan.....	139	
Enoch Carver.....	J. H. Jackson.....	Eagle.....	Eagle No. 1.....	4-6	Fan.....	45	140
Enoch Carver.....	John E. Carver.....	Eagle.....	Gas.....	4-6	Fan.....	91	141
Enoch Carver.....	John E. Carver.....	Eagle.....	Block No. 5.....	6-6	Furn.....	65	142
M. T. Davis.....	.....	Eagle.....	Eagle.....	5to6	Fan.....	60	143
M. T. Davis.....	A. P. Shear.....	Eagle.....	Eagle.....	4-6	Fan.....	67	144
T. P. Davis.....	Mathew Dixon.....	Eagle.....	Gas.....	4	Furn.....	49	145
J. E. Burdette.....	Jas. I. Ellis.....	Mt. Carbon.....	Gas No. 2.....	5-6	Fan.....	95	146
Thos. A. Bartlam.....	Jas. Giles.....	Crescent.....	Coal Valley.....	5	Fan.....	58	147
Thos. A. Bartlam.....	Richard Howe.....	Crescent.....	No. 5 Block.....	6	Nat.....	85	148
Thos. A. Bartlam.....	.....	Crescent.....	Eagle.....	3-3	Fan.....	22	149
D. T. Evans.....	J. I. Absalom.....	Powellton.....	Powellton.....	4	Nat.....	10	150
D. T. Evans.....	J. I. Absalom.....	Powellton.....	Powellton.....	5-10	N & F.....	2	151
William Brown.....	John Holmes.....	Mt. Carbon.....	Kittan.....	3-6	F & N.....	96	152
William Brown.....	Thomas Taney.....	Mt. Carbon.....	Kittan.....	3-6	Nat.....	40	153
W. N. Page.....	John W. Straughan.....	Ansted.....	So. Kittan.....	6to11	F & F.....	395	155
F. A. Deitz.....	Dick Seamore.....	Hawk Nest.....	Sewell.....	3	Furn.....	70	156
Jas. Lomar.....	Jas. Lowar.....	Sunnyside.....	Nuttall.....	3	Furn.....	39	157
J. W. Masterson.....	Alex. Thompson.....	Elmo.....	Nuttall.....	3	Furn.....	37	158
J. A. Boone.....	John Rhodes.....	Elmo.....	Nuttall.....	3-6	Furn.....	29	159
Fred R. Raven.....	Val Bachmann.....	Fayette.....	Nuttall.....	3	Furn.....	62	160
Fred R. Raven.....	Jas. W. Sims.....	Nuttallburg.....	Nuttall.....	3-6	Fan.....	85	161
P. H. Brown.....	John W. Small.....	Nuttallburg.....	Nuttall.....	3-6	Nat.....	55	162
W. F. Boone.....	Dick Seymour.....	Nuttallburg.....	Nuttall.....	4	Nat.....	94	164
Geo. Holland.....	Mike Quwilling.....	Boone.....	Nuttall.....	3to6	Furn.....	82	165
Geo. Holland.....	A. Olinger.....	Boone.....	Nuttall.....	4	Nat.....	42	166
Geo. Holland.....	Jno. Olinger.....	Boone.....	Nuttall.....	4	Furn.....	80	167
D. W. Boone.....	Thomas Stead.....	Winona.....	Nuttall.....	4	Furn.....	73	168
John D. Campbell.....	Wm. R. Hall.....	Winona.....	Nuttall.....	4	Furn.....	62	169
H. H. Rothwell.....	Chas. Higgins.....	Nuttallburg.....	Nuttall.....	3-10	Nat.....	28	170
H. H. Rothwell.....	Chas. Higgins.....	Nuttallburg.....	Nuttall.....	3-10	Nat.....	46	171
J. L. Beury.....	John Demsey.....	Caperton.....	Nuttall.....	3-6	Nat.....	61	172
Chas. Catlett.....	J. C. Gilmour.....	Caperton.....	Sewell.....	3-10	Furn.....	120	173
Chas. Catlett.....	Thos. Boyd.....	Caperton.....	Sewell.....	4	Furn.....	70	174
J. A. McGuffin.....	T. G. Burke.....	Sewell.....	Sewell.....	3	Furn.....	175	
F. Howald.....	David Evandoll.....	Rush Run.....	Sewell.....	4	Furn.....	53	176
John Laing.....	G. L. Moran.....	Rush Run.....	Sewell.....	4-2	Furn.....	83	177
G. H. Caperton.....	Robert Boyd.....	Fire Creek.....	Fire Creek.....	3-4	N & F.....	115	178
J. R. Seal.....	R. J. Riley.....	Fire Creek.....	Fire Creek.....	4	Fan.....	95	179
Thos. C. Beury.....	Geo. D. McDaniel.....	Beury.....	Fire Creek.....	4-4	Fan.....	135	180
John Laing.....	John Long.....	Rush Run.....	Fire Creek.....	5-6	Fan.....	119	181
John Laing.....	W. F. Dilts.....	Rush Run.....	Fire Creek.....	5	Fan.....	117	182
G. H. Caperton.....	Arthur Boyde.....	Concho.....	Sewell.....	4-6	N & F.....	142	183
O. C. Kubach.....	J. Edwards.....	Stone Cliff.....	Sewell.....	4-6	N & F.....	106	184
J. L. Beury.....	Wm. Clatworthy.....	Thurmond.....	Fire Creek.....	4	Nat.....	95	185
C. C. Beury.....	R. B. Hanna.....	Claremont.....	Quinnimont.....	4	Nat.....	150	186
Geo. Lawton.....	H. C. Peters.....	Claremont.....	Fire Creek.....	4	Nat.....	110	187
Michael Kraus.....	Mike Harrington.....	Coit.....	Fire Creek.....	3-4	Nat.....	45	188
J. B. McGuffin.....	A. O. Gibson.....	Bissell.....	Sewell.....	5	Fan.....	120	189
G. W. Jones.....	David Evandoll.....	Red Star.....	Sewell.....	5to6	Fan.....	120	190
Justus Collins.....	Thos. Lewis.....	Collinsville.....	Sewell.....	4to5	2F ns.....	275	191
James Laing.....	David Stoddard.....	Sun.....	Sewell.....	6	Fan.....	175	192
E. E. Walker.....	E. T. Hudson.....	Dunloop.....	Sewell.....	5-6	Nat.....	113	193
E. E. Walker.....	E. T. Hudson.....	Dunloop.....	Sewell.....	4to5	Nat.....	194	
A. P. Sherer.....	A. P. Sherer.....	MacDonald.....	Sewell.....	6	Nat.....	130	195
Samuel Dixon.....	V. A. Miller.....	MacDonald.....	Sewell.....	5-2	Fan.....	200	196
Samuel Dixon.....	Wm. Ellis.....	Mt. Hope.....	Sewell.....	5-6	Fan.....	105	197
D. C. Boyce, Reeve.....	John McIntosh.....	Quinnimont.....	Quinnimont.....	3-4	Nat.....	198	
D. C. Boyce, Reeve.....	John McIntosh.....	Quinnimont.....	Quinnimont.....	3to4	Nat.....	162	199
C. H. Robins.....	Jno. L. Hughes.....	Quinnimont.....	Quinnimont.....	3-6	Nat.....	55	200

Condition in which the mines were found upon inspections made for the year ending June 30, 1899, third district, Edward Pinkney, inspector.

No.	County.	Name of Mine	Name of Operator.	Condition of Mine.	Deficient in
201	Fayette ...	Laurel Creek.....	Laurel Creek Coal Co	Bad..	M. L. Secs. 10 & 11.
202	.....	Greenwood	Greenwood	Fair	M. L. Secs. 10 & 11.
203	Nicholas...	Greendale.	W. P. Rend.....	.....
204	Raleigh ...	Royal	Royal Coal & Coke Co ...	Good	

Directory of mines, names of coal beds, kinds of ventilation and total of all kinds of inside employes for the year ending June 30, 1899.

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked.		Kind of Ventilation.	Tot'l inside employes	No.
			Thickness.				
			Name.	Ft. In.			
W. A. Brown.....	J. A. Brown.....	Quinnimont.....	Quinnimont.	3-10	Nat...	80	201
W. A. Brown.....	Wm. Crukiner.....	Quinnimont.....	Fire Creek..	4	Nat...	210	202
M. H. Staughan....	E. Hope.....	Vaughan.....	Lewiston....	4-4	Furn	23	203
J. H. Howald.....	Dave Laing.....	Prince.....	Fire Creek..	3-4	Furn	115	204

Condition in which the mines were found upon inspections made for the year ending June 30, 1899, Fourth district, William J. Preece, inspector.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in.
205	Mingo	Camp Branch.	Camp Branch C. & C. Co.	Fair.	M. L. Secs. 10 & 11. Ventilation.
206		Freeport.	Van Kirk Coal & Mining Co.	Fair.	
208		Logan	Logan Consolidated C. Co.	Good	Ventilation. Ventilation.
209		Maritime	Maritime Coal Co.	Fair.	
210		Thacker	Thacker Coal & Coke Co.	Good	
211		Mingo	Mingo Coal & Coke Co.	Fair.	
212		Lynn	Logan Coal & Coke Co.	Bad.	
213		Dingess	Dingess Coal Co.	Good	Ventilation. Ventilation.
214		Grapevine	Grapevine Coal & Coke Co.	Good	
215		Lick Fork	Lick Fork Coal & Coke Co.	Good	
216	M'Dowell	Davy	Davy Coal Co.	Fair.	M. L. Secs. 10 & 11. Ventilation.
217		Tidewater	Tidewater Coal & Coke Co.	Fair.	
218		Bottom Creek	Bottom Creek C. & C. Co.	Fair.	
219		Peerless	Peerless Coal & Coke Co.	Good	
220		Empire	Empire Coal & Coke Co.	Fair.	
221		Shawnee	Shawnee Coal & Coke Co.	Good	Ventilation.
222		Eureka	Eureka Coal & Coke Co.	Good	
223		Pulaski	Pulaski Iron Co.	Good	
224		Keystone	Keystone Coal & Coke Co.	Good	
225		Algoma	Algoma Coal & Coke Co.	Good	Ventilation.
226		Gilliam	Gilliam Coal & Coke Co.	Good	
227		Rolfe	Rolfe Coal & Coke Co.	Good	
228		Roanoke	Roanoke Coal & Coke Co.	Fair.	
229		Indian Ridge	Indian Ridge C. & C. Co.	Good	
230		Arlington	Arlington Coal & Coke Co.	Fair.	Ventilation. Drainage.
231		Greenbrier	Greenbrier Coal & Coke Co.	Good	
232		McDowell	McDowell Coal & Coke Co.	Good	
233		Ashland	Ashland Coal & Coke Co.	Good	
234		Elk Ridge	Elk Ridge Coal & Coke Co.	Good	
235		Lynchburg	Lynchburg Coal & Coke Co.	Fair.	Drainage.
236		Powhatan	Powhatan Coal & Coke Co.	Good	
237		Upland Nos. 1 & 2	Upland Coal & Coke Co.	Good	
238		Houston	Houston Coal & Coke Co.	Good	
239		Crozer No. 1.	Crozer Coal & Coke Co.	Good	
240		Crozer No. 2.	Crozer Coal & Coke Co.	Good	Ventilation.
241		Turkey Gap	Turkey Gap C. & C. Co.	Good	
242		Norfolk	Norfolk Coal & Coke Co.	Good	
243		Lick Branch	Norfolk Coal & Coke Co.	Good	
244		Angle	Norfolk Coal & Coke Co.	Good	
245	Mercer	Shamokin	Shamokin Coal & Coke Co.	Good	M. L. Secs. 10 & 11. Drainage.
246		Elkhorn	Elkhorn Coal & Coke Co.	Fair.	
247		Sterling east & west	Mill Creek Coal & Coke Co.	Fair.	M. L. Secs. 10 & 11.
248		Coaldale	Coaldale Coal & Coke Co.	Fair.	
249		Klondike	Klondike Coal & Coke Co.	Fair.	M. L. Secs. 10 & 11.
250		Buckeye	Buckeye Coal & Coke Co.	Good	
251		Caswell	Caswell Creek C. & C. Co.	Good	Ventilation.
252	Mercer	Booth-Bowen	Booth-Bowen C. & C. Co.	Fair.	
253		Louisville	Louisville Coal & Coke Co.	Good	M. L. Secs. 10 & 11. Drainage.
254		Goodwill	Goodwill Coal & Coke Co.	Fair.	
255	Mercer	East & West	Southwest Virginia Imp Co.	Fair.	M. L. Secs. 10 & 11. Drainage.
256					

Directory of mines, names of coal beds, kind of ventilation and total number of all kinds of inside employees, for the year ending June 30, 1899.

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked.		Kind of Ventilation.	Total inside employees	No.
			Thickness				
			Name.	Ft. In.			
James Quitter	Wm. Dines	Dingess	Kittan	4	Furn	66	205
J. W. VanKirk	Thos. Johnson	Dingess	Up. Freeport	6	Nat.	27	206
S. T. Lambert	C. J. Adams	Hunter	Thacker	4-8	Fan	148	208
O. H. Miller	John Moody	Thacker	Thacker	4-8			209
A. Moore	M. F. Booth	Thacker	Thacker	6	Furn	136	210
John E. Williams	W. P. Farne	Hatfield	Thacker	3-6	Furn	36	211
Arthur Moore	G. W. Caffey	Sheppard	Thacker	4-6	Furn	46	212
D. K. Koger	D. K. Koger	Dingess	Thacker	4	Furn		213
John Woolcock	Wm. Moore	Edgerton	Thacker	11	Furn	48	214
W. A. Lindsay	S. C. Fisher	Dingess	Thacker	7	Furn	41	215
J. F. Mitchell	J. F. Mitchell	Hallsville		3	Fan	9	216
F. L. Schoew	T. L. Booth	Tidewater	No. 3 Poca	5-8	Fan	65	217
Wm. Spencer	W. H. Anderson	Vivian	No. 3	6-3	Fan	78	218
H. B. Wright	Matthew Hall	Vivian	Poca	5-9	Fans	114	219
W. D. Ord	J. M. Shank	Langraff	No. 3 Poca	6	Fan	55	220
P. P. Flanagan	John Griffin	Eckman	No. 3	6-6	Fan	80	221
L. E. Tierney	W. T. Hetherman	Eckman	No. 3 Poca	7-6	Fan	110	222
S. F. Morris	Adam Lindley	Eckman	Poca	6,10	Furn	111	223
J. K. F. Steele	John Murry	Keystone	Poca	6-6	Furn	60	224
W. H. Thomas	W. J. Pritchard	Algoma	Poca No. 3.	6-1	2F'ns	177	225
P. P. Flanagan	Joseph Cooper	Gilliam	No. 3.	6-3	Fan	75	227
James E. Jones	Wm. H. Walters	Worth	No. 3	5-3	Fan	75	228
A. D. Rice	B. F. Tipton	Worth	Poca	5-4	F & F	65	229
C. Botsford	J. V. Hackworth	Worth	Poca No. 3.	5-3	Furn	50	230
R. H. Palmer	John Connel	McDowell	Poca	4-8	Fan	65	231
Jairus Collins	W. T. Williams	McDowell	No. 3	6-2	Fan	80	232
T. H. Cooper	Levi Workman	McDowell	Poca	5-6	Fan	50	233
J. W. Edwards	F. M. Cox	Ashland	No. 3	5-1	Fan	70	234
L. E. Tierney	C. A. Devenny	Kyle	Poca No. 3.	6-6	Fan	85	235
L. E. Tierney	Thomas Dennen	Kyle	Poca No. 3.	7-6	Fan	120	236
L. E. Tierney	Jas. Hetherman	Powhatan	Poca No. 3.	8	Fan	105	237
Rolfe Gerhardt	H'r'r'r Frankenhild	Elkhorn	Poca	8	Fan	119	238
T. E. Houston	Benj. Lewis	Elkhorn	Poca	8	Fan	175	240
J. J. Tierney	S. S. Cooper	Elkhorn	No. 3	8	Fan	206	241
J. J. Tierney	Geo. Guy	Elkhorn	No. 3.	8	Fan		242
W. H. McQuail	Jas. Hopkins	Fennis	Flat T'p No.3	8	Fan	225	243
Stuart M. Buck	J. W. Devenny	Maybeury	Poca	9	Fan	107	244
Stuart M. Buck	Jas. G. Boyd	Maybeury	Poca	8	Fan	75	245
Stuart M. Buck	W. F. Whitt	Maybeury	Poca	8	Fan	32	246
J. A. Cardwell	E. M. Stephens	Maybeury	Poca No. 3.	6-10	Fan	115	247
J. E. Barlow	Thos. Barrett	Maybeury	No. 3.	7-3	Fan	135	248
T. H. Cooper	Jas. R. Booth	Coopers	Poca No. 3.	8	Fan	105	249
T. H. Cooper	Thos. Williams	Coaldale	Poca No. 3.	8-6	Fan	160	250
Ed. Cooper	J. Butterworth	Coopers	Poca No. 3.	8-6	Air H	9	251
J. D. Hewitt	Thos. Gent	Bramwell	Poca No. 3.	5-6	Fan	85	252
Jenkin' Jones	Milton Gilmore	Bramwell	No. 3	8	2F'ns	207	253
Jonathan P. Bowen	T. E. Thomas	Bramwell	No. 3.	6to8	Fan	54	254
Jairus Collins	M. J. Saunders	Goodwill	Flat Top	6	Fan	80	255
Philip Goodwill	M. F. Flanner	Goodwill	Poca No. 3.	4-8	Fan	70	256
Wm. Lang	R. B. Baldwin	Pocahontas, Va.	Poca No. 3.	10	3 F'ns	738	257

PART III—1900

EIGHTEENTH ANNUAL REPORT

For the Year Ending June 30, 1900

TABLE OF CONTENTS.

PART III—1900.

For the year ending June 30th.

Letter of transmittal.....	245
----------------------------	-----

CHAPTER I.

General summary of the report for the year 1900.....	247
--	-----

CHAPTER II.

Production of Coal and Coke.....	249
----------------------------------	-----

CHAPTER III.

Coke and Coke Ovens.....	267
--------------------------	-----

CHAPTER IV.

Machine mining.....	272
---------------------	-----

CHAPTER V.

Wages paid and selling price of Coal and Coke.....	276
--	-----

CHAPTER VI.

Transportation of Coal and Coke.....	280
--------------------------------------	-----

CHAPTER VII.

Powder used in the mines, improvements.....	282
---	-----

CHAPTER VIII.

Strikes at the coal mines.....	284
--------------------------------	-----

CHAPTER IX.

Summary of the men employed at the mines and coke ovens.....	287
--	-----

CHAPTER X.

Mine Locomotives and Boilers.....	297
-----------------------------------	-----

CHAPTER XI.

Explosion of gas and powder.....	301
----------------------------------	-----

CHAPTER XII.

Red Ash mine explosion.....	308
-----------------------------	-----

CHAPTER XIII.

Accidents	336
-----------------	-----

CHAPTER XIV.

Annual reports of the District Inspectors.....	352
--	-----

CHAPTER XV.

Directory of and condition of mines.....	361
--	-----

CHAPTER XVI.

Legislation.....	372
------------------	-----

To His Excellency,
G. W. Atkinson,
Governor of West Virginia:

SIR:—

For the fourth time during your excellency's administration as the chief executive I have the honor to submit an annual report upon the mining conditions in the State.

It is most gratifying to be able to report that the mining activity throughout the State during the past four years is unparalleled within the history of the State and that the percentage of gain in the production of coal has never been equalled by any nation or commonwealth in the world.

During a period of great activity at the mines and a corresponding desire on the part of the workmen to avail themselves of the opportunity to add to their finances, the dangers in the mines are often given a secondary consideration.

Reasonable and practical legislation in a large measure results in a protection against fatalities. One careless person within a mine may take the life of many others who exercise the greatest care. So long as coal is mined and dangerous conditions prevail that long will unscrupulous employes be found who will continue to shock the masses through their carelessness in robbing the more careful and heroic miners of their lives. Legislation strictly observed by those to whom it applies will prevent mine explosions.

In my third annual report reference was made to the uneasiness that this department entertained through fear of an explosion at some of the gaseous mines through the lack of more effective legislation. We had to wait but a few months to learn of the explosion within the Red Ash mine in which forty-six (46) lives were lost. This accident is treated more fully in chapter XII of this report.

I earnestly request that our forthcoming legislature be importuned to enact into law the main features of the Bill this department offered for passage in 1899.

Your attention is called to the increased number of mines in the first mining district. This district should be divided and another district inspector provided.

Labor trouble of a serious nature has had no place at any of our mines during the past three years. Prices paid for labor have been materially increased.

The operators have shown a sincere willingness to follow such suggestions as the district inspectors have had occasion to make.

The district mine inspectors, over whom I have the honor to preside, have faithfully performed such duties as I have assigned them and I desire to acknowledge the faithful service they have given me and the State.

Being the first chief of the Department of Mines and Mining and having had the organization of the inspection system in my charge, I beg in conclusion, to thank you for the confidence reposed in and the honor conferred upon me.

Very respectfully,

Your most obedient servant,

JAMES W. PAUL,

Chief Mine Inspector.

Charleston, W. Va., Dec. 14, 1900.

CHAPTER I.

GENERAL SUMMARY OF THE REPORT FOR THE YEAR 1900.

During the year there were produced at the mines 18,886,911 tons of coal of 2240 pounds each, of which 3,762,771 tons were used in the manufacture of 2,496,107 tons of coke of 2000 pounds each. This is an increase over the previous year of 2,636,761 tons of coal and 1,106,204 tons of coke.

The total value of the coal at the mines was \$14,049,683.25, being in excess of the value the previous year by \$3,781,213.47.

The value of the coke for the year was \$4,368,786.49 which is in excess of the value of the coke the previous year by \$1,931,062.74.

The increase in the selling price over the previous year was,—coal 12 cts, and coke 50 cts, per ton.

The number of days the miners were active was 261 against 240 the previous year. The increase in the number of employes over the previous year was 2,909.

During the year there were 141 persons killed at the mines, an increase of 52 over the previous year, and 176 persons non-fatally injured, a decrease of 17 under the previous year.

There were mined 2,639 acres of coal compared with 2,361 acres the previous year,—an increase of 278 acres.

The average tonnage of coal produced per miner was 1104 tons as compared with 1032 tons for 1899.

The average earnings of each miner for the year were \$507.09 against \$376.40 during the previous year, which is due to the increased tonnage with an increase in wages from 36 cts. to 41 cts. per ton.

The following table gives a comparative summary of the contents of this report and of the previous year.

The following Table Exhibits a Comparative Statement and Summary of the Annual Reports for 1899 and 1900:

	For Year ending June 30, 1900.	For Year ending June 30th, 1899.	Increase of 1900 over 1899.	Dec. of 1900 un- der 1899.
Number of counties in which coal is mined on a commercial scale.....	21	21	.....	.....
Number of firms operating coal mines on a commercial scale.....	247	237	10	.....
Number of openings of all kinds subject to the mining law.....	325	267	58	.....
Number of tons (2240 lbs) pick mined coal from commercial mines.....	16,199,300	14,366,871	1,832,429	.....
Number of tons (2240 lbs) machine mined coal from commercial mines.....	2,537,611	1,733,279	804,332	.....
Total number of tons of coal from commercial mines (2240 lbs).....	18,736,911	16,100,150	2,636,761	.....
Estimated tons of coal from small mines (2240 lbs).....	150,000	150,000	.....	.....
Total number of tons of coal from all mines (2240 lbs).....	18,886,911	16,250,150	2,636,761	.....
Number of tons of coal converted into coke (2000 lbs).....	4,214,301	3,108,097	1,106,204	.....
Number of tons of coke manufactured (2000 lbs).....	2,496,107	1,950,179	545,928	.....
Total value of coal at the mines.....	\$ 14,049,683.25	\$ 10,268,469.78	\$ 3,781,213.47	.....
Total value of coke at the ovens.....	\$ 4,368,786.49	\$ 2,437,723.75	1,931,062.74	.....
Value of a ton of coal at the mines (2240 lbs).....	\$.75	\$.6319	\$.1181	.....
Value of a ton of coke at the ovens (2000 lbs).....	\$1.75	\$1.25	\$.50	.....
Number of mining machines in use.....	241	140	101	.....
Average number of coke ovens in use.....	7,385	6,884	501	.....
Number of days the mines were in operation.....	261	240	21	.....
Number of days the ovens were in operation.....	264	272	.....	8
Number of pick miners employed in commercial coal mines.....	14,723	14,119	604	.....
Number of machine operators and miners employed in commercial coal mines.....	2,371	1,608	763	.....
Number of under-ground employees in commercial coal mines.....	4,726	3,907	819	.....
Number of outside employees connected with the commercial coal mines.....	2,815	2,461	354	.....
Number of coke employees.....	3,382	3,013	369	.....
Total number of men employed at the commercial mines and ovens.....	28,017	25,108	2,909	.....
Number of men killed.....	141	89	52	.....
Number of men injured non-fatally.....	176	193	.....	17
Number of men employed for each man killed.....	198	282	.....	84
Number of men employed for each man injured.....	160	130	30	.....
Tons of coal mined in commercial mines for each fatality.....	133,949	182,566	.....	48,637
Tons of coal mined in commercial mines for each non-fatality.....	107,312	84,197	23,115	.....
Number of wives left widows.....	42	42	.....	.....
Number of children left fatherless.....	95	106	.....	11
Acres of coal worked out.....	2,638.78	2,361.19	277.59	.....
Number of tons of coal produced (in commercial mines) per miner, pick and machine miners and runners included..	1,104	1,032	72	.....
Average earnings of each miner per year..	\$507.09	\$376.40	\$130.69	.....
Average earnings of each miner per month..	\$42.25	\$31.36	\$10.89	.....
Average price per ton of 2240 lbs. received for mining (cents).....	41.06	36.12	4.94	.....

CHAPTER II.

PRODUCTION OF COAL AND COKE, 1900.

Throughout this report coal is expressed in tons of 2240 pounds, unless otherwise noted, and coke in tons of 2000 pounds.

The total production of any mine refers to all the coal taken out of the mine.

The total production of coal from all sources for the year was:

18,886,911	tons, of which
99,824	tons were used in operating the mines,
263,635	tons were sold to local trade,
3,762,771	tons were used in the manufacture of coke,
14,760,681	tons were shipped from the mines.
<hr/>	
18,886,911	tons, total.

PRODUCTION OF COAL AND COKE IN WEST VIRGINIA, BY COUNTIES, FOR THE YEAR
ENDING JUNE 30th, 1900.

NAME OF COUNTY	Coal (Tons of 2240 lbs.)					Coke (tons of 2000 lbs.)		
	Production.		Distribution			1st 6 Months	2nd 6 Months	Total for Year
	1st 6 Months	2nd 6 Months	Total for Year.	Used in Operating Mines	Sold to local trades and tenants.	Used in Coke Ovens	Quantity Shipped	
Barbour.....	31,391	41,050	73,041	577	361	16,046	56,657	12,579
Brooke.....	27,223	34,163	61,396	90	13,107	.....	48,199	.....
Hancock.....	27,281	19,732	47,013	107	43,335	.....	3,571	.....
Harrison.....	253,110	394,290	647,430	2,887	4,772	25,192	614,579	15,994
Marion.....	1,394,967	1,531,310	2,925,967	14,659	17,831	496,075	2,397,312	298,119
Marshall.....	130,688	111,488	242,176	2,308	13,305	.....	236,563	.....
Mineral.....	256,552	306,115	562,667	535	1,923	.....	560,298	.....
Monongalia.....	37,000	45,148	82,148	.....	306	29,851	51,991	17,077
Ohio.....	48,526	48,084	96,610	1,323	2,178	.....	92,907	.....
Preston.....	186,968	216,642	403,610	2,050	2,681	68,960	329,979	46,250
Taylor.....	161,347	209,683	376,030	979	1,657	.....	373,394	.....
Tucker.....	504,048	591,826	1,095,874	10,236	4,802	413,381	610,255	157,435
Randolph.....	40,984	62,223	103,207	598	2,732	4,704	95,173	3,223
Kanawha.....	627,115	829,775	1,456,890	6,103	23,139	46,878	1,380,770	32,665
Mason.....	38,545	46,822	85,367	13,146	31,18	.....	38,033	.....
Putnam.....	90,428	113,021	203,449	700	2,679	.....	200,077	.....
Fayette.....	2,102,064	2,444,358	4,547,062	19,738	46,819	756,048	3,724,377	481,699
Raleigh.....	28,299	40,061	68,360	572	1,000	20,213	46,575	15,460
Mingo.....	218,609	248,086	466,695	2,110	17,540	.....	447,045	.....
McDowell.....	1,919,619	2,232,483	4,142,102	20,000	22,959	1,512,033	2,557,110	1,070,033
Mercer.....	478,315	568,622	1,046,937	883	6,321	313,250	726,483	297,277
Small Mines.....	75,000	75,000	150,000	.....	.....	.....	150,000	.....
Totals.....	8,673,319	10,213,592	18,886,911	99,821	263,635	3,762,771	14,760,681	2,496,107

ORDER IN THE PRODUCTION BY COUNTIES OF COAL AND COKE,

For the fiscal year ending June 30th, 1900.

NAME OF COUNTY.	No. of Mines.	Coal (tons of 2,240 lbs.).			Coke (tons of 2,000 lbs.).			Order in Production	
		1st 6 Months	2nd 6 Months	Total.	1st 6 Months	2nd 6 Months	Total.	Coal.	Coke.
Barbour.....	3	31,991	41,050	73,041	4,839	7,740	12,579	18	11
Brooke.....	3	27,233	34,163	61,396	.....	.....	.....	20	.....
Hancock.....	4	27,281	19,732	47,013	.....	.....	.....	21	.....
Harrison.....	21	253,140	394,290	647,430	6,483	9,511	15,994	7	9
Marion.....	15	1,394,567	1,531,340	2,925,907	142,257	155,862	298,119	3	3
Marshall.....	4	130,688	111,488	242,176	.....	.....	.....	12	.....
Mineral.....	1	256,552	306,115	562,667	.....	.....	.....	8	.....
Monongalia.....	2	37,000	45,148	82,148	7,345	9,732	17,077	17	8
Ohio.....	4	48,526	48,084	96,610	.....	.....	.....	15	.....
Preston.....	6	186,968	216,642	403,610	23,725	22,525	46,250	10	6
Taylor.....	5	166,347	209,683	376,030	.....	.....	.....	11	.....
Tucker.....	6	504,048	594,826	1,098,874	138,296	157,435	295,731	5	4
Randolph.....	3	40,984	62,223	103,207	.....	3,223	3,223	14	12
Kanawha.....	35	627,115	829,775	1,456,890	15,844	16,821	32,665	4	7
Mason.....	5	38,545	46,822	85,367	.....	.....	.....	16	.....
Putnam.....	2	90,428	113,021	203,449	.....	.....	.....	13	.....
Fayette.....	72	2,102,064	2,444,938	4,547,002	223,599	258,100	481,699	1	2
Raleigh.....	1	28,299	40,061	68,360	6,538	8,922	15,460	19	10
Mingo.....	12	218,609	248,086	466,695	.....	.....	.....	9	.....
McDowell.....	34	1,909,619	2,232,483	4,142,102	478,730	591,303	1,070,033	2	1
Mercer.....	8	478,315	568,622	1,046,937	94,535	112,742	207,277	6	5
Small Mines.....	.....	75,000	75,000	150,000	.....	.....	.....	.....	.....
Totals.....	247	8,673,319	10,213,592	18,886,911	1,142,191	1,353,916	2,496,107	.....	.....

PRODUCTION OF COAL AND COKE IN BARBOUR COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.).				Coke (tons of 2,000 lbs.)			
	Production.			Used in operating the mine	Distribution.			Total for year.
	1st 6 mos.	2nd 6 mos.	Total for year.		Sold to local trade and tenants	Used in coke ovens	Quantity shipped.	
Junior Coal Co.....	20,473	26,589	47,062	497	325	16,046	30,194	4,839 7,740 12,579
Philippi C. M. Co.....	.....	.....	.....	.....	.....	.....	.....	.....
Tygart's Valley C. & C. Co.....	11,518	12,500	24,018	80	36	.....	23,902	.....
Laurel Hill C. & C. Co.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	1,961	1,961	.....	.....	.....	1,961	.....
Southern C. & Trans. Co.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	31,99	41,050	73,041	577	361	16,046	56,057	4,839 7,740 12,579

The production of coal for the past year was 73,041 tons against 63,275 tons the previous year, an increase of 9,766 tons. The production of coke more than doubled the figures for the previous year, being 12,579 tons, against 5,980 tons, a gain of 6,599 tons. This increase came mostly from the Junior Coal Co.

New coal operations are being contemplated in this county and it is probable that the production of coal may be quite large within two more years. In order of production Barbour is 18th, in coal and 11th, in coke, having fallen, since last year, one point in coal and two points in coke production.

PRODUCTION OF COAL IN BROOKE COUNTY.

NAME OF COMPANY.	Coal (tons of 2240 lbs.).							Coke (tons of 2000 lbs.)			
	Production.			Distribution.							
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in op-erating mine	Sold to local trade and tenants.	Used in coke ovens	Qu'n-tity ship-ped.	1st 6 mos.	2nd 6 mos.	Total for the year.	
Panhandle C. Co.....	11,163	10,469	21,632	.....	.....	.....	21,632	.....	.....	.....
Gilchrist C. Co.....	9,852	14,162	24,014	.....	.....	.....	24,014	.....	.....	.....
J. W. M. Carmichael.....	6,218	9,532	15,750	90	13,107	.....	2,553	.....	.....	.....
Totals.....	27,233	34,163	61,396	90	13,107	.....	48,199	.....	.....	.....

For two previous years this county ranked as eighteenth in point of production but for the past year it is twentieth with a production of 61,396 tons which is 1,780 tons less than the production for 1899.

PRODUCTION OF COAL IN HANCOCK COUNTY.

NAME OF COMPANY.	Coal (tons of 2240 lbs.).							Coke (tons of 2000 lbs.)			
	Production.			Distribution.							
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in op-erating mine	Sold to local trade and tenants.	Used in coke ovens	Qu'n-tity ship-ped.	1st 6 mos.	2nd 6 mos.	Total for the year.	
Mack Mfg. Co.....	.....	107	107	107	.....	.....	.....	.....	.....	.....
Magnet C. Co.....	20,523	14,272	34,795	.....	34,795	.....	.....	.....	.....	.....
Magnet C. Co.....	3,187	5,353	8,540	.....	8,540	.....	.....	.....	.....	.....
McElfresh Fire Clay Co.	3,571	.....	3,571	.....	.....	.....	3,571	.....	.....	.....
Totals.....	27,281	19,732	47,013	107	43,335	.....	3,571	.....	.....	.....

Hancock is the smallest producer of coal of all the commercial coal counties and has to its credit 47,013 tons as compared with 39,440 tons for 1899—an increase of 7,573 tons. The product mined in this county is mostly used in the local brick and tile works.

PRODUCTION OF COAL AND COKE IN HARRISON COUNTY.

NAME OF COMPANY	Coal (tons of 2240 lbs.)						Coke (tons of 2000 lbs.)			
	.Production.			Distribution.						
	1st 6 Mos.	2nd 6 mos.	Total for the year.	Used in oper-ating mine.	Sold to lo-cal trade and ten-ants	Used in coke ovens	Quan-tity ship-ped.	1st 6 mos.	2nd 6 mos.	Total for the year.
(Worthington No. 2.)										
Worthington C. & C. Co.....	26,182	30,899	57,081	.....			57,081	.....	
Globe C. & C. Co.....	7,865	12,003	19,868	160	.....	839	18,869	.....	565	565
(Jackson No. 1.)										
Pinnickinnick C. Co.....	35,000	45,000	80,000	1,000	1,000	.....	78,000	.....	
do (Fall Run No. 2.).....	25,000	15,000	40,000	.....	500	.....	39,500	.....	
(Maulsby)										
Briar Hill C. & C. Co.....	.....	3,992	3,992	.....			3,992	.....	
do (Harbert).....	.....			.....				.....
do (Gypsy).....	.....	2,608	2,608	.....			2,608	.....	
do (Enterprise).....	50,225	78,525	128,750	.....	906	.....	127,844	.....	
do (Farnum).....	33,601	40,577	74,178	.....	176	11,618	62,384	3,801	3,289	7,090
Glen Fall C. & C. Co.....	22,332	21,275	43,607	162	350	.....	43,095	.....	
Howard C. & C. Co.....	21,659	27,344	49,003	.....	470	6,314	42,219	325	3,300	3,625
Despard Gas C. Co.....	10,051	12,191	22,242	.....	630	.....	21,612	.....	
West Fork M. Co.....	16,000	23,000	39,000	65	140	.....	38,795	.....	
Fairmont and Balto. C. & C. Co.....	4,957	31,813	36,770	1,000	500	6,421	28,849	2,357	2,357	4,714
Hutchinson C. Co.....	.....	4,167	4,167	.....			4,167	.....	
Cleveland and Fair. C. & C. Co.....	.....	12,004	12,004	.....			12,004	.....	
Columbia C. & C. Co.....	268	16,993	17,261	.....			17,261	.....	
Riverdale M. Co.....	.....	1,002	1,002	.....			1,002	.....	
Viropa C. & C. Co.....	.....	475	475	.....			475	.....	
Solon-Lowery M. Co.....	.....	8,000	8,000	500	100	.....	7,400	.....	
Meadow Brook C. & C. Co.....	.....	6,722	6,722	.....			6,722	.....	
Hutchinson Fuel Co.....	.....	700	700	.....			700	.....	
Totals.....	253,140	394,290	647,430	2,887	4,772	25,192	614,579	6,483	9,511	15,994

With a production of 647,430 tons of coal and 15,994 tons of coke Harrison shows an increase over last year of 234,280 tons of coal and 10,123 tons of coke, placing the county seventh as a coal and ninth as a coke producer, when compared with other counties. The increase in coal production is short only 37,274 tons of the production of the county in 1898.

PRODUCTION OF COAL AND COKE IN MARION COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.).						Coke (tons of 2,000 lbs.).		
	Production.			Distribution.			1st 6 mos.	2nd 6 mos.	Total for year.
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine.	Sold to local trade and tenants.	Used in coke ovens.	Quantity shipped		
(W. Fairmont shaft, W. Fairmont C. & C. Co.....	129,154	141,639	270,793	.....	892	22,257	247,644	7,484	13,358
do (New England)	199,494	222,802	422,296	.....	1,635	71,109	349,492	21,613	42,666
Gaston Gas C. Co..... (Montana)	138,413	139,306	278,319	1,339	892	63,552	212,536	19,950	38,792
Montana C. & C. Co	142,687	151,619	294,306	3,000	1,342	91,042	195,922	25,205	57,305
do (Aurora).	.....	19,174	19,174	.....	.....	.....	19,174	.....	.....
Mason C. & C. Co..... (Murray)	23,315	24,523	47,838	600	120	30,998	16,120	8,652	18,236
Briar Hill C. & C. Co	72,773	87,968	160,741	.....	240	23,720	136,781	7,156	7,317
Va. & Pitts. C. & C. Co.....	33,028	48,379	81,407	1,000	1,000	21,730	57,677	6,900	8,861
Nos. 2, 3 & 5.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Monongah Co.....	102,965	373,316	776,281	4,100	7,250	140,210	624,721	38,569	42,640
Clark C. & C. Co.....	52,829	70,349	123,178	1,500	1,500	.....	120,178	.....	.....
J. A. Clark C. Co.....	59,717	72,908	132,625	2,000	2,000	.....	128,625	.....	.....
Pennois C. & C. Co. (Worthington No. 1)	19,915	37,987	57,902	520	600	.....	56,782	.....	.....
Worthington C. & C. Co.....	55,927	65,870	121,797	.....	.....	28,457	93,340	6,728	9,591
Highland C. & C. Co	46,000	58,900	104,900	600	300	.....	101,000	.....	.....
Palatine C. Co.....	18,350	16,000	34,350	.....	.....	.....	34,350	.....	.....
Totals.....	1394567	1531340	2925907	11,639	17,831	496,070	2397342	142,257	155,862
									298,119

With an increased production over last year of 532,924 tons of coal and 142,134 tons of coke, Marion county stands as the third coal and coke producing county in the State. With the exception of McDowell county, Marion county has experienced the largest increase in coal production.

Should an export coal trade be developed the coal from this county would be no small factor owing to the coal being of a texture suitable for long shipment and rough handling.

PRODUCTION OF COAL IN MINERAL COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.)					
	Production.			Distribution.		
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine.	Sold to local trade and tenants	Quantity shipped.
Davis C. & C. Co. (Hampshire).....	32,112	43,528	75,640	170	10	75,460
do (Savage).....	36,183	37,644	73,827	160	.....	73,667
do (Windom).....	46,342	45,895	92,237	.....	56	92,181
W. Va. C. & Pgh. Ry. Co.....	141,915	179,048	320,963	206	1,857	318,900
Totals.....	256,552	306,115	562,667	536	1,923	560,208

The increase in production over last year is 8,381 tons and the county drops from sixth to eighth in the order of production.

PRODUCTION OF COAL IN MARSHALL COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.)					
	Production.			Distribution.		
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine.	Sold to local trade and tenants	Quantity shipped.
Boggs Run M. & Mfg. Co.....	24,855	20,751	45,606	571	892	44,143
Wheeling Steel & Iron Co.....	11,202	9,645	20,847	238	.....	20,609
Glendale C. Co.....	49,079	40,276	89,355	600	.....	88,755
Moundsville C. Co.....	45,552	40,816	86,368	899	12,413	73,056
Totals.....	130,688	111,488	242,176	2,308	13,305	226,563

As the coal from this county reaches new markets its value becomes better known and the product is much more sought, especially for steam purposes, and where the coal is to undergo frequent handling it retains its lumpy nature.

A large percentage of the product is consumed at the steel and iron plants in Ohio and Marshall counties.

In 1897 the county produced 162,396 tons; in 1898, 165,874; in 1899, 233,800 and in 1900, 242,176 tons, or an increase in four years of 79,780 tons.

For reason of the facilities for shipment this county is destined to become an important coal producer.

PRODUCTION OF COAL AND COKE IN MONONGALIA COUNTY.

NAME OF COMPANY.	Coal, (tons of 2240 lbs.)						Coke (tons of 2000 lbs.)		
	Production,			Distribution			1st 6 mos.	2nd 6 mos.	Total for the year.
	1st 6 mos.	2nd 6 mos.	Total for the year.	Sold to local trade and tenants.	Used in coke ovens	Quantity shipped.			
Opekiska C. & C. Co..... (Beechwood)	31,300	15,650	46,950	200	14,685	32,065	5,216	2,608	7,824
Briar Hill C. & C. Co	5,700	29,498	35,198	106	15,166	19,926	2,129	7,124	9,253
Totals.....	37,000	45,148	82,148	306	29,851	51,991	7,345	9,732	17,077

Monongalia with 82,148 tons of coal and 17,077 tons of coke occupies the seventeenth in order of coal and eighth in order of coke production, with an increase of 25,355 tons of coal and 11,873 tons of coke over the previous year.

PRODUCTION OF COAL IN OHIO COUNTY.

NAME OF COMPANY.	Coal (tons of 2240 lbs.)					
	Production.			Distribution.		
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used to operate the mine.	Sold to local trade and tenants	Quantity shipped.
T. E. Kasley & Son.....	6,340	10,341	16,681	89	.....	16,592
Richland Coal Works.....	23,369	12,792	36,161	223	89	35,849
Elm Grove C. Co.....	16,205	14,831	30,536	973	2,089	27,474
La Belle Iron Works	2,612	10,620	13,232	240	.....	12,992
Totals.....	48,526	48,084	96,610	1,525	2,178	92,907

In 1899 with a production of 119,960 tons of coal Ohio held the rank of fourteen. During the past year the county produced 96,610 tons and is fifteenth in point of production.

PRODUCTION OF COAL AND COKE IN PRESTON COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs).							Coke (tons of 2,000 lbs).		
	Production.			Distribution.						
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine	Sold to local trade and tenants.	Used in coke ovens.	Quantity shipped.	1st 6 mos.	2nd 6 mos.	Total for the year.
Austin C. & C. Co.....	30,000	30,000	60,000	600	350	54,400	4,650	18,125	18,125	36,250
Gorman C. & C. Co.....	.....	18,301	18,301	.....	100	.....	18,201	.....	.....	.....
(South Side Nos. 2 and 3.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merchants C. Co.....	50,000	50,000	100,000	450	.....	.....	99,550	.....	.....	.....
(North Side No. 1.)	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merchants C. Co	66,000	66,000	132,000	.....	1,000	.....	131,000	.....	.....	.....
Irona Coal Co.....	28,268	41,041	69,309	.....	731	.....	68,578	.....	.....	.....
Oakland C & C. Co.....	12,700	11,300	24,000	1,000	500	14,500	8,000	5,600	4,400	10,000
Totals.....	186,968	216,642	403,610	2,050	2,681	68,900	329,979	23,725	22,525	46,250

The increased productions over last year are coal 126,437 and coke 12,227 tons, leaving the county in its former position in point of production, being tenth as a coal and sixth as a coke producer.

PRODUCTION OF COAL IN TAYLOR COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs).					
	Production.			Distribution.		
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating mine.	Sold to local trade and tenants	Quantity shipped.
Grafton C. & C. Co , Grafton.....	29,092	18,336	47,428	.....	350	47,078
Grafton C. & C. Co., Sandlick.....	10,496	26,460	36,956	.....	200	36,756
Flemington C. & C. Co.....	85,559	124,887	213,446	979	867	211,600
New York C. Co.....	37,000	35,000	72,000	.....	240	71,760
B. F. Hadabaugh & Co.....	1,200	5,000	6,200	.....	.....	6,200
Totals.....	166,347	209,683	376,030	979	1,657	373,394

In point of production Taylor is the eleventh coal county with 376,030 tons to its credit, an increase over last year of 126,927 tons.

PRODUCTION OF COAL AND COKE IN TUCKER COUNTY.

NAME OF COMPANY.	Coal (tons of 2240 lbs.)							Coke (tons of 2000 lbs.)		
	Production.			Distribution.						
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating mine.	Sold to local trade and tenants	Used in coke ovens.	Quantity shipped.	1st 6 mos.	2nd 6 mos.	Total for the year.
Cumberland C. Co.....	65,000	97,000	162,000	1,000	....	78,000	83,000	20,000	32,000	52,000
Davis C. & C. Co. Thomas Drift.....	181,250	218,273	399,523	7,855	2,727	15,987	372,954	4,827	5,832	10,659
Davis C. & C. Co. Thomas Shaft.....	68,561	69,212	137,776	8	.....	31,520	106,248	8,970	12,043	21,013
W. Va. C. & P. Ry. Coke-ton No. 1.....	17,185	25,485	42,670	.....	132	29,759	12,779	12,817	12,546	25,363
W. Va. C. & P. Ry. Coke-ton No. 2.....	71,977	84,584	156,525	1,373	382	108,284	46,486	32,840	35,171	68,011
W. Va. C. & P. Ry. Coke-ton No. 3.....	100,072	100,308	200,380	.....	1,561	180,031	18,788	58,842	59,843	118,685
Totals.....	504,048	594,826	1,098,874	10,236	4,802	443,581	640,255	138,296	157,435	295,731

This county gained over last year's output 508,836 tons of coal and 155,093 tons of coke, placing it fifth in order of coal and fourth in order of coke production.

One mine, Thomas drift, produced within less than 100,000 tons of the production of the county the previous year.

The production of the county is in excess of the total tonnage shipped from West Virginia to the Lake ports during 1899.

A greater tonnage of coal was used in the coke ovens than the county produced the previous years.

PRODUCTION OF COAL AND COKE IN RANDOLPH COUNTY.

NAME OF COMPANY.	Coal (tons of 2240 lbs.)							Coke (tons of 2000 lbs.)	
	Production.			Distribution.					
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating mine.	Sold to local trade and tenants	Used in coke ovens.	Quantity shipped.	2nd 6 mos.	Total for the year.
Randolph C. Co.....	33,939	45,665	79,604	548	2,548	.....	76,508	.....	.....
Junior C. Co.....	7,045	12,033	19,077	25	184	4,704	14,167	3,223	3,223
Maryland Smokeless C. Co.....	.....	4,525	4,525	25	.....	.....	4,500	.....	.....
Totals.....	40,984	62,223	103,207	598	2,732	4,704	95,175	3,223	3,223

Randolph with an increase of 71,232 tons of coal over last year has risen from the smallest producer to the position of fourteenth in point of production, having passed seven other counties.

For the first time the county appears as a coke producer with a tonnage of 3,223 short tons.

PRODUCTION OF COAL AND COKE IN KANAWHA COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.)						Coke (tons of 2,000 lbs.)			
	Production.			Distribution.						
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine	Sold to local trade and tenants.	Used in coke ovens	Quantity shipped.	1st 6 mos.	2nd 6 mos.	Total for the year.
Elk River C. & C. Co.....	2313	2313	4626	.....	.....	.....	4626	.....	.....	.....
Falling Rock Cannel C. Co	3125	3125	6250	.....	.....	.....	6250	.....	.....	.....
W. W. Graham	7500	3758	11258	11	89	.....	11158	.....	.....	.....
Campbell's Creek C. Co., Spring Fork	18730	50675	69405	644	488	.....	68273	.....	.....	.....
Campbell's Creek C. Co., New Mine.....	18730	50675	69405	642	489	.....	68274	.....	.....	.....
White & Calderwood.....	.....	89	89	.....	.....	.....	89	.....	.....	.....
New Diamond C. Co.....	17850	3750	21600	.....	.....	.....	21600	.....	.....	.....
Quincy C. Co.....	5500	6500	12000	.....	200	.....	11800	.....	.....	.....
Peabody C. Co.....	18109	22929	41038	.....	275	.....	40763	.....	.....	.....
Victor C. Co.....	8254	9400	17654	18	32	.....	17604	.....	.....	.....
Virginia M. Co.....	18348	19428	37776	106	.....	.....	37670	.....	.....	.....
Big Mountain M. Co.....	19996	20596	40592	178	534	.....	39880	.....	.....	.....
Kelly's Creek M. Co., B No. 4.....	36203	46578	82781	.....	3050	.....	79731	.....	.....	.....
Kelly's Creek M. Co., C No. 2.....	33607	60883	94490	.....	1327	.....	93163	.....	.....	.....
Kelly's Creek M. Co., C No. 3.....	9533	758	10291	.....	.....	.....	10291	.....	.....	.....
Kelly's Creek M. Co., D No. 4.....	5300	18440	23740	.....	528	.....	23212	.....	.....	.....
Cedar Grove Coll. Co.....	9504	13787	23291	357	100	.....	22834	.....	.....	.....
Riverside C. Co.....	30151	27667	57818	.....	1865	.....	55953	.....	.....	.....
Cannelton C. Co., No. 2 Gas	54905	51421	106326	890	600	44950	59886	15844	15621	31465
Cannelton C. Co., Cannel....	1893	2044	3937	.....	.....	.....	3937	.....	.....	.....
The Marmet Co.....	16919	27723	44642	804	982	.....	42856	.....	.....	.....
Winifrede C. Co., South.....	40083	51764	94847	714	3735	.....	90398	.....	.....	.....
Winifrede C. Co., Winifrede Gas.....	1785	1859	3644	.....	.....	.....	3644	.....	.....	.....
Winifrede C. Co., North.....	41337	55435	96772	1029	906	.....	94837	.....	.....	.....
Coalburg Coll. Co.....	32661	29197	61858	.....	500	.....	61358	.....	.....	.....
Stevens C. Co., Aeme.....	16889	22035	38924	.....	21	.....	38903	.....	.....	.....
Stevens C. Co., Keystone.....	37412	32009	69421	.....	1000	.....	68421	.....	.....	.....
Robinson C. Co., No. 4.....	10817	20116	30933	90	.....	.....	30843	.....	.....	.....
Robinson C. Co., Klondike.	4194	4112	8306	90	511	.....	7705	.....	.....	.....
East Bank C. & C. Co.....	.....	8035	8035	22	536	1928	5549	.....	1200	1200
Kanawha M. Co.....	4265	18634	22899	.....	.....	.....	22899	.....	.....	.....
Crown Hill C. Co.....	3031	14560	17591	.....	780	.....	16811	.....	.....	.....
Belmont C. Co., Lewiston & Coalburg.....	29161	41928	74089	.....	1200	.....	72889	.....	.....	.....
Chesapeake M. Co.....	41741	54780	96521	499	726	.....	95296	.....	.....	.....
Montgomery C. Co., Consolidated.....	10750	9212	19971	.....	.....	.....	19971	.....	.....	.....
Montgomery C. Co., Mt. Morris.....	16510	14881	31391	.....	2620	.....	28771	.....	.....	.....
Davis Creek C. Co.....	.....	2679	2679	9	45	.....	2625	.....	.....	.....
Totals.....	627115	829775	1456890	6103	23139	46878	1380770	15844	16821	32665

This is the fourth successive year the county has held fourth rank as a coal producer. The increases over last year are, coal 163,822 tons and coke 21,682 tons. The inducement to build coke ovens in this county is not great since a ready and profitable market is open for the sale of the small size coal.

PRODUCTION OF COAL IN MASON COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.).					
	Production.			Distribution.		
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine.	Sold to local trade and tenants	Quantity shipped.
Camden Clay Co.....	3,860	3,616	7,476	.....	7,476	.....
Beech Grove C. Co.....	4,464	3,571	8,035	.....	75	7,960
Hope S. & C. Co.....	4,699	7,545	12,244	11,804	440	.....
Liverpool S. & C. Co.....	6,746	8,159	14,905	.....	14,905	.....
Hartford City S. Co.,	5,000	7,034	12,034	747	484	10,803
Consumers C. M. Co., New Haven.....	11,954	8,087	20,041	595	8,740	10,706
New Castle.....	1,822	8,810	10,632	.....	2,068	8,564
Totals.....	38,545	46,822	85,367	13,146	34,188	38,033

21,500 tons represents the decrease in the production of coal in this county compared with the previous year.

PRODUCTION OF COAL IN PUTNAM COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 tons).					
	Production.			Distribution.		
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine.	Sold to local trade and tenants	Quantity shipped.
Carver Coal Co.....	37,223	35,750	72,973	700	546	71,727
Marmet-Smith C. & M. Co., Florence and Pocatalico.....	53,205	77,271	130,476	.....	2,133	128,343
Totals.....	90,428	113,021	203,449	700	2,679	200,070

Putnam with an increase of 39,445 tons over last year still occupies the same relative position as a coal producer as it has the two years previous, that of thirteenth.

PRODUCTION OF COAL AND COKE IN FAYETTE COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.).					Coke (2,000 lbs.).			
	Production.		Distribution.			Quantity shipped.	1st 6 Months	2nd 6 Months	Total for the year.
	1st 6 Months	2nd 6 Months	Total for the year.	Used in operating the mine.	Sold to local trade and tenants.	Used in coke ovens.			
Longacre Coll. Co.	35,779	42,394	78,173	.....	210	20,970	5,677	8,461	14,138
W. R. Johnson & Co.	6,111	6,210	12,321	.....	214	.....	.....	.....	.....
Boomer C. & C. Co.	35,339	41,267	76,606	446	.....	.....	.....	.....	.....
Davis-Gordon Co., No. 5	20,100	20,280	40,380	.....	1,150	.....	.....	.....	.....
Davis-Gordon Co., Fureka	18,500	23,500	42,000	.....	.....	.....	.....	.....	.....
Mecca C. & C. Co.	42,983	57,512	100,500	80	1,550	.....	.....	.....	.....
Coal Valley M. Co.	5,128	5,798	10,926	182	240	.....	.....	.....	.....
W. R. Johnson, No. 1, Eagle	11,402	14,042	25,441	.....	.....	25,414	.....	.....	.....
W. R. Johnson, No. 2, Gas	24,514	15,890	40,405	.....	.....	18,004	.....	.....	.....
W. R. Johnson, No. 5, Block	35,016	41,578	76,594	.....	1,500	.....	.....	.....	.....
Carver Bros. Co., No. 2, Gas	22,228	30,462	52,690	.....	.....	.....	.....	.....	.....
Carver Bros. Co., Edgewater, No. 5	31,181	34,579	65,760	.....	.....	.....	.....	.....	.....
Carver Bros. Co., Eagle	17,339	17,631	34,970	704	.....	31,467	10,803	8,523	19,326
Carver Bros. Co., No. 1	10,837	12,833	23,670	.....	.....	.....	.....	.....	.....
The St. Clair Co., Nos. 1 and 2	36,460	36,298	72,758	.....	.....	32,760	15,615	10,457	26,102
J. F. Burdette	21,296	30,020	51,316	1,017	402	.....	.....	.....	.....
Mt. Carbon Co., Ltd., Exelsior	5,195	5,899	11,091	.....	.....	.....	.....	.....	.....
Mt. Carbon Co., Ltd., Vulcan	80,015	76,237	156,252	811	4,677	91,619	31,375	29,176	60,551
Gt. Kanawha Coll. Co., Ltd., No. 1	33,838	41,874	75,712	.....	4,500	33,105	10,300	9,060	19,420
Gt. Kanawha Coll. Co., Digby	17,291	20,674	43,965	.....	.....	.....	.....	.....	.....
Gt. Kanawha Coll. Co., No. 5	5,413	9,158	14,571	.....	.....	.....	.....	.....	.....
Gt. Kanawha Coll. Co., Eagle	1,358	833	2,191	.....	.....	.....	.....	.....	.....
Gauley Mountain C. Co.	150,799	130,621	281,420	714	244	57,644	19,497	19,119	38,616
D. S. Cook & Son, C. & C. Co.	8,000	12,000	20,000	200	200	11,400	2,600	3,600	6,200
Victoria C. & C. Co., Sunnyside	.....	4,811	4,811	100	100	2,600	.....	1,303	1,303
New River M. Co.	7,000	7,500	14,500	600	.....	.....	.....	.....	.....
Michigan C. Co.	.....	13,131	13,131	150	601	.....	.....	.....	.....
Low Moor Iron Co.	14,790	13,281	28,074	230	600	6,000	1,740	2,000	3,740
Nuttallburg C. & C. Co., Nuttall	16,313	22,361	38,674	178	715	12,622	3,402	7,201	10,603
Newlyn C. & C. Co.	.....	600	600	.....	.....	.....	.....	.....	.....
Nuttallburg C. & C. Co., Keeneys Creek	12,990	15,827	28,817	.....	401	.....	.....	.....	.....

PRODUCTION OF COAL AND COKE IN FAYETTE COUNTY—CONTINUED.

NAME OF COMPANY.	Coal (tons of 2240 lbs.)				Coke (2000 lbs.)			
	Production.		Distribution.		Quantity shipped.	1st 6 Months.	2nd 6 Months.	Total for the year.
	1st 6 Months	2nd 6 Months	Total for the year.	Used in operating the mine.	Sold to local trade and tenants.	Used in coke ovens.		
Brown C. Co.	21,000	21,000	42,000	300	300	41,400		
Roan C. & C. Co.	16,418	18,185	34,613		300	34,313		
Ballinger C. Co., Ballinger No. 1.	19,325	23,032	42,357	24	300	42,033		
Ballinger C. Co., Ballinger No. 2.	6,892	8,786	15,588	15		15,573		
Blume C. & C. Co.	28,549	28,640	57,189	600	3,400	53,589		
Smokeless C. Co.	15,635	21,296	37,091		680	36,411		
Rothwell C. Co.	17,283	25,731	43,071	600	500	41,974		
Victoria C. & C. Co., North Side.	13,765	16,941	30,726	1,000	2,000	46,292		
Victoria C. & C. Co., South Side.	35,742	45,198	81,210		400	852	12,720	25,440
Caperton C. & C. Co.	5,873	13,382	19,255		300	18,955	573	573
Longdale Iron Co.	33,000	40,871	73,871		3,000	70,871	23,955	15,965
Cunard C. Co.	12,631	19,059	31,690		952	31,438		
Brooklyn C. Co.	16,976	26,622	43,598	1,000	526	23,069	330	11,687
Fire Creek C. & C. Co.	23,721	23,055	46,776	425	1,650	30,959	9,218	20,401
Central C. Co.	22,365	26,469	49,161		600	17,392	31,469	7,099
Echo C. & C. Co., Echo Nos. 1 and 2.	41,791	46,579	91,370	800	600	16,145	3,292	6,404
Red Ash C. Co.	49,778	51,031	100,809		788	30,535	10,200	9,006
Rush Run C. & C. Co.	34,287	54,249	88,536	1,066	835	15,362	71,273	18,317
The Thurmond C. Co.	48,863	43,305	92,168	575	809	90,784		9,370
Beury C. & C. Co.	28,899	27,618	56,517	100	1,190	37,628	5,196	9,007
Big Bend C. Co.	4,000	21,000	25,000	175	210	27,615		
Beechwood C. & C. Co., Keystone and Beechwood.	40,417	61,151	101,568		960	9,000	2,700	5,400
Alaska C. & C. Co.	53,488	51,874	105,362	1,000	1,200	8,308	1,148	2,810
Slater C. Co.	4,640	5,750	10,400		100	10,300		
Harvey C. & C. Co.	71,040	80,000	151,040	1,500	600	40,000	13,000	26,000
Star C. & C. Co.	135,339	65,479	120,818	1,600	700	108,950		
Collins Coll. Co.	123,000	261,500	384,500			210,725	16,500	32,400
Sun C. & C. Co.	66,637	89,461	156,101	1,800	1,400	50,775		
McKell C. & C. Co.	3,006	3,006	6,006	1	5	3,000		
Dunn Loop C. & C. Co., Dunn Loop Nos. 1 and 2.	79,124	86,327	165,051		200	164,851		
Turkey Knob C. Co.	60,000	70,000	130,000		1,350	128,650		

PRODUCTION OF COAL AND COKE IN FAYETTE COUNTY—CONTINUED.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.)						Coke (tons of 2,000 lbs.)	
	Production.			Distribution.			1st 6 Months.	2nd Months.
	1st 6 Months.	2nd Months.	Total for the year.	Used in oper- ating the mine.	Sold to local trade and tenants.	Used in coke ovens.	Quantity shipped.	Total for the year.
Macdonald Coll. Co.	75,131	75,464	151,595	1,200	500	10,242	139,653	7,028
Sugar Creek C. & C. Co.	53,944	67,687	121,631				121,631	
White Oak Coll. Co.								
Quinnimont C. Co., Big Q. and No. 3.	49,626	52,220	101,846		2,835	33,154	65,857	10,965
Robins C. Co.	9,455	3,689	13,144		75		13,069	
Laurel Creek C. Co.	20,312	28,426	48,738		600		48,138	
Greenwood C. Co.	100,000	110,000	210,000	100	500		209,400	
Carbon C. & C. Co.		6,112	6,112	50	10	360	5,712	204
Raven C. & C. Co.		3,600	3,600	50	10		3,540	
W. P. Rend, No. 2.	5,883	41,408	50,291		720		49,571	
Totals.....	2,102,064	2,414,938	4,517,002	19,758	46,819	756,048	3,721,377	258,100
								481,679

The increases over last year's production are, coal 100,533 tons and coke 26,700 tons. Fayette continues to hold first place as a coal and second place as a coke producer, which position it is destined to hold for some time.

The coal from this county comes from the mines in the New River Field.

PRODUCTION OF COAL AND COKE IN RALEIGH COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.)							Coke (tons of 2,000 lbs.)			
	Production.			Distribution.							
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine	Sold to local trade and tenants.	Used in coke ovens	Quantity shipped.	1st 6 mos.	2nd 6 mos.	Total for the year.	
Royal C. & C. Co.....	28299	40061	68360	572	1000	20213	46575	6538	8922	15460	
Raleigh C. & C. Co.....											
Wright C. & Co.....											
Totals.....	28299	40061	68360	572	1000	20213	46575	6538	8922	15460	

From the position of sixteenth in point of coal production and seventh as a coke producer the county has fallen to nineteenth as a coal and tenth as a coke producer with a loss under the previous year of 25,010 tons coal and 4,938 tons of coke.

PRODUCTION OF COAL IN MINGO COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.)					
	Production.			Distribution.		
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating the mine.	Sold to local trade and tenants	Quantity shipped.
Camp Branch C. & C. Co.....	9,000	9,000	18,000		40	17,960
Olympia C. & C. Co.....	1,100		1,100			1,100
Van Kirk C. & M. Co.....	1,312		1,312			1,312
Logan Cons. C. Co., Maritime.....		19,947	19,947	180	250	19,517
Red Jacket C. Co.....		8,670	8,670		50	8,620
Logan Cons. C. Co., Logan.....	47,566	70,207	117,773	1,200	600	115,973
Lynn C. & C. Co.....	18,334	13,803	32,137			32,137
Mingo C. Mining Co.....	12,015	14,301	26,319			26,319
Thacker C. & C. Co.....	41,968	45,781	87,749		2,000	85,749
Grapevine C. Co.....	11,173	17,622	28,795			28,795
Lick Fork C. Co.....	75,000	44,000	119,000	730	14,600	108,670
Pearl Coal Co.....	1,141	4,752	5,893			5,893
Totals.....	218,609	248,086	466,695	2,110	17,540	447,045

This county with an increase of 116,401 tons of coal over the previous year's production still occupies the ninth place in order of coal producing counties.

PRODUCTION OF COAL AND COKE IN McDOWELL COUNTY.

NAME OF COMPANY.	Production.				Coal (tons of 2,240 lbs.).				Coke (tons of 2,000 lbs.).			
	1st 6 Months		2nd 6 Months		Total for the year.	Distribution.						
	1st 6 Months	2nd 6 Months	Used in operating the mine.	Sold to local tenants.		Used in coke ovens.	Quantity shipped.	1st 6 Months	2nd 6 Months	Total for the year.		
Tidewater C. & C. Co.	33,253	41,187	74,440	583	24,016	49,811	7,758	10,133	17,891			
Bottom Creek C. & C. Co.	32,712	41,591	74,303	375	31,475	45,223	8,063	11,652	19,715			
Peelless C. & C. Co.	56,662	57,170	113,832	250	47,020	64,899	14,619	20,900	35,519			
Empire C. & C. Co.	38,460	39,906	78,366	480	19,018	58,418	6,416	8,854	15,327			
Shawnee C. & C. Co.	59,083	59,658	118,741	1,200	45,655	70,686	13,578	18,377	28,536			
Eureka C. & C. Co.	64,517	76,847	141,364	1,200	45,422	95,912	14,119	16,963	31,082			
Pulaski Iron Co.	109,700	129,000	238,700	1,577	19,768	137,355	24,277	31,927	68,804			
Keystone C. & C. Co.	40,000	42,000	82,000	2,000	1,200	59,800	7,000	7,800	14,800			
Algoma C. & C. Co.	101,398	106,924	208,322	1,672	83,401	123,219	25,401	30,613	56,011			
Gilman C. & C. Co.	49,531	56,081	105,612	800	50,436	52,999	11,734	19,789	31,523			
Rolle C. & C. Co.	50,255	59,957	110,212	310	310	70,240	11,319	14,903	26,222			
Roanoke C. & C. Co.	46,802	55,883	102,685	363	42,213	59,746	10,877	17,188	28,365			
Indian Ridge C. & C. Co.	43,401	48,680	91,081	500	40,000	60,381	13,491	26,982	40,473			
Arlington C. & C. Co.	50,361	53,355	103,716	1,000	1,000	45,022	63,697	13,542	22,665			
Greenbrier C. & C. Co.	54,365	67,500	121,865	875	47,439	73,551	13,598	18,015	31,613			
McDowell C. & C. Co.	51,505	55,666	107,171	875	38,766	68,105	13,590	15,094	28,950			
Ashland C. & C. Co.	53,689	60,495	114,182	1,075	41,111	71,798	13,287	15,193	28,480			
Elk Ridge C. & C. Co.	46,230	58,471	104,701	1,000	38,226	66,178	15,724	20,823	36,517			
Lynchburg C. & C. Co.	57,375	69,393	126,768	1,000	47,266	77,502	14,925	21,267	35,792			
Powhatan C. & C. Co.	79,393	93,585	172,978	1,000	73,623	99,355	18,012	27,972	46,014			
Upland C. & C. Co., Nos. 1 and 2.	103,015	116,978	219,993	1,000	89,564	131,029	25,785	34,810	60,565			
Houston C. & C. Co.	60,639	78,689	139,328	1,300	61,240	73,588	23,107	22,225	45,332			
Crozer C. & C. Co., Nos. 1 and 2.	152,710	181,308	334,018	2,400	126,161	205,723	48,626	52,733	101,365			
Turkey Gap C. & C. Co.	115,742	151,474	267,216	2,400	107,920	162,036	31,075	36,750	67,825			
Norfolk C. & C. Co., Norfolk.	92,950	104,750	197,700	2,000	59,700	121,000	19,300	20,500	39,800			
Norfolk C. & C. Co., Lick Branch	61,625	71,200	132,825	600	49,030	85,375	16,500	16,200	32,700			
Norfolk C. & C. Co., Angie	33,100	47,900	81,000	500	24,600	55,200	5,600	10,900	16,400			
Shamokin C. & C. Co.	69,348	80,018	149,366	1,022	36,661	111,683	12,487	14,817	27,334			
Elkhorn C. & C. Co.	87,452	126,533	213,985	600	69,298	141,848	23,711	24,100	47,811			
Big Four C. & C. Co.*	2,000	2,000	4,000	.....	.....	4,000	.....	.....	.....
Big Sandy C. & C. Co.	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	1,909,619	2,232,483	4,142,102	20,000	22,059	1,542,033	478,730	591,303	1,070,033			

*Estimated.

McDowell County with a production of 4,142,102 tons of coal and 1,070,033 tons of coke occupies the same relative positions as it has for the past three years, being second in rank as a coal and first in rank as a coke producer. The increases in production over last year are, coal 625,434 tons and coke 146,867 tons.

PRODUCTION OF COAL AND COKE IN MERCER COUNTY.

NAME OF COMPANY.	Coal (tons of 2,240 lbs.).							Coke (tons of 2,000 lbs.).		
	Production.			Distribution.						
	1st 6 mos.	2nd 6 mos.	Total for the year.	Used in operating mine	Sold to local trade and tenants.	Used in coke ovens.	Quantity shipped.	1st 6 mos.	2nd 6 mos.	Total for the year.
Mill Creek C. & C. Co.....	50,849	60,640	111,489	.....	1,275	70,054	40,160	22027	24,808	46,835
Coaldale C. & C. Co.....	77,836	100,165	178,001	.....	1,420	39,511	137,070	11478	16,515	27,993
Buckeye C. & C. Co. . .	48,734	47,395	96,129	.....	.....	35,899	60,230	10138	12,301	22,439
Caswell Creek C. & C. Co..	114,886	139,713	254,599	312	1,608	54,656	198,025	15570	21,708	37,278
Booth-Powen C. & C. Co...	103,919	136,529	240,449	300	1,477	50,546	288,125	14705	16,885	31,590
Louisville C. & C. Co.....	50,864	53,254	104,118	.....	.....	41,652	62,466	13579	14,173	27,752
Goodwill C. & C. Co.....	30,227	30,426	60,653	271	541	20,932	38,609	7038	6,352	13,390
S.-W. Va. Imp. Co., Second East.....	1,000	500	1,500	.....	.....	.....	1,500	.....	.....	.....
Totals.	478,315	568,622	1046937	883	6,321	313,250	726,483	94535	112,742	207,277

The production of coal is 97,321 tons less than for last year and the production of coke is 14,345 in excess of last year. The county is now sixth in order of coal production and fifth in order of coke, compared with last year it has lost one point in coal and two points in coke.

CHAPTER III.

COKE AND COKE OVENS.

There are in the state 9,128 coke ovens the largest majority of which are of the Beehive type. There are several plants made up of the Welsh type and one by-product plant, these, however, furnish a small percentage of the coke production.

Of the 9,128 ovens only 7,385 were operated for 264 days during the year, producing 2,496,107 tons of coke from 4,214,301 tons of coal giving a yield of 58.6 per cent. of the coal used, each oven coking 338 tons of coke.

Randolph County appears for the first time as a coke producer with 3,223 tons to its credit.

There are in all twelve counties in the state producing coke at 92 plants and employing 3,382 men

Tons of coal used in ovens, tons of coke produced, yield of coke, ovens in and out of use, average no ovens operated, days active and men employed at coke ovens.—1900.

COUNTIES.	No. coke plants reported.	Total tons of coal used in the ovens (2,000 lbs).	Total tons of coke produced (2,000 lbs).	Percentage of yield.	Total No. of coke ovens reported in use.	Total No. coke ovens reported not in use.	Average No. ovens operated during the year.	Average No. days the ovens were operated.	Average No. men employed at ovens.	District.
Barbour.....	1	17,971	12,579	69.9	36	20	16	290	12	1
Harrison.....	4	28,215	15,994	56.6	128	60	68	158	25	1
Marion.....	9	555,604	298,119	53.6	752	137	615	318	251	1
Monongalia.....	12	33,433	17,077	51.0	55	5	50	244	20	1
Preston.....	12	77,168	46,250	60.2	93	1	92	300	32	1
Tucker.....	6	496,811	295,731	59.5	679	43	636	298	238	1
Randolph.....	1	5,268	3,223	61.1	50	1	49	106	14	1
Kanawha.....	2	52,503	32,665	62.2	107	15	92	272	38	2
Fayette.....	28	846,773	481,699	54.1	2,183	296	1,887	280	772	3
Raleigh.....	1	22,639	15,460	68.2	78	.....	78	168	17	3
McDowell.....	29	172,076	107,033	62.0	4,036	888	3,148	300	1,631	4
Mercer.....	7	350,840	207,277	59.0	931	277	654	293	334	4
Totals.....	92	4214301	2496107	58.6	9,128	1,743	7,385	264	3,382	...

Total number of coke ovens in the State..... 9,128

Average number of ovens operated during the year..... 7,385

Average number of days operated during the year..... 264

Average percentage of yield..... 58.6

Tons of coke produced per oven in operation..... 338

Table showing tons of Coal converted into coke, tons of coke produced and number of ovens in and out of use.—1900.

COUNTY.	NAME OF COMPANY.	Tons of coal used in ovens (tons of 2000 lbs.)	Total tons of coal used in county.	Tons of coke produced (tons of 2000 lbs.)	Total tons of coke produced in county	No. coke ovens reported.	Total No. ovens reported in county.	Avg. No ovens in use.	Avg. days ovens were worked.
Barbour.....	Junior C. Co.....	17,971	.....	12,579	.....	36	.....	16	290
	Totals.....	.....	17,971	.....	12,579	.....	36	.....	290
Harrison.....	Globe C. & C. Co.....	937	.....	565	.....	29	.....	12	60
	Briar Hill C. & C. Co.....	13,016	.....	7,090	.....	23	.....	20	274
	Howard C. & C. Co.....	7,071	.....	3,625	.....	50	.....	9	147
	Fairmont & B. C. & C. Co.	7,191	.....	4,714	.....	27	.....	27	120
	Totals.....	.....	28,215	.....	15,994	.....	128	17	158
Marion.....	W. Fairmont C. & C. Co.....	24,927	.....	13,358	.....	36	.....	36	365
	W. Fairmont C. & C. Co.....	79,643	.....	42,666	.....	108	.....	80	365
	Gaston Gas C. Co.....	71,178	.....	38,792	.....	90	.....	80	300
	Montana C. & C. Co.....	105,328	.....	57,305	.....	158	.....	125	365
	Mason C. & C. Co.....	34,718	.....	18,236	.....	50	.....	50	311
	Briar Hill C. & C. Co.....	26,566	.....	14,473	.....	36	.....	30	312
	Va. & Pittsburg C. & C. Co.	24,337	.....	15,761	.....	44	.....	44	275
	The Monongah Co.....	157,035	.....	81,209	.....	160	.....	120	261
	Worthington C. & C. Co.,	31,872	.....	16,319	.....	70	.....	50	311
	Totals.....	.....	555,604	.....	298,119	.....	752	68	318
Monongalia..	Opekiska C. & C. Co.....	16,447	.....	7,824	.....	20	.....	20	313
	Briar Hill C. & C. Co.....	16,986	.....	9,253	.....	35	.....	30	200
	Totals.....	.....	33,433	.....	17,077	.....	55	23	244
Preston.....	Austin C. & C. Co.....	60,928	.....	36,250	.....	83	.....	82	300
	Oakland C. & C. Co.....	16,240	.....	10,000	.....	10	.....	10	300
	Totals.....	.....	77,168	.....	46,250	.....	93	46	300
Tucker.....	Cumberland C. Co.....	87,360	.....	52,000	.....	135	.....	100	311
	Davis C. & C. Co.....	17,905	.....	10,659	.....	22	.....	20	311
	Davis C. & C. Co.....	35,303	.....	21,013	.....	62	.....	60	311
	W. Va. C. & P. Ry, M. Dept.	33,330	.....	25,363	.....	61	.....	60	274
	W. Va. C. & P. Ry, M. Dept.	121,279	.....	68,011	.....	147	.....	146	297
	W. Va. C. & P. Ry, M. Dept.	201,634	.....	118,685	.....	252	.....	250	297
	Totals.....	.....	496,811	.....	295,731	.....	679	105	298
Randolph....	Junior Coal Co.	5,268	.....	3,223	.....	50	.....	49	106
	Totals.....	.....	3,268	.....	3,223	.....	50	49	106
Kanawha.....	Cannelton Coal Co.....	50,344	.....	31,465	.....	95	.....	80	297
	East Bank C. & C. Co.....	2,159	.....	1,200	.....	12	.....	12	108
	Totals.....	.....	52,503	.....	32,665	.....	107	61	272
Fayette.....	Longacre Colliery Co.....	23,486	.....	14,138	.....	100	.....	50	310
	W. R. Johnson, Nos. 1 & 2	48,661	.....	24,772	.....	104	.....	70	250
	Carver Bros. Co.....	35,243	.....	19,326	.....	54	.....	54	263
	The St. Clair Co.....	36,611	.....	26,102	.....	86	.....	70	330
	The Mt. Carbon Co., Ltd...	102,616	.....	60,551	.....	202	.....	200	312
	Gt. Kanawha Coll. Co. Ltd	37,077	.....	19,420	.....	66	.....	66	289
	Gauley Mt. C. Co.....	64,561	.....	38,616	.....	102	.....	95	365
	D. S. Cook & Son C. & C. Co.	12,768	.....	6,200	.....	25	.....	25	260
	Victoria C. & C. Co.....	2,912	.....	1,303	.....	18	.....	18	130
	Low Moor Iron Co.....	6,720	.....	3,740	.....	12	.....	12	262
	Nuttallburg C. & C. Co.....	14,136	.....	10,603	.....	72	.....	39	268
	Victoria C. & C. Co.....	51,847	.....	25,440	.....	135	.....	133	277
	Carperton C. & C. Co.....	954	.....	573	.....	18	.....	18	60
	Longdale Iron Co.....	79,375	.....	45,965	.....	193	.....	193	365
	Brooklyn Coal Co.....	21,272	.....	11,687	.....	68	.....	65	180
	Fire Creek C. & C. Co.....	34,764	.....	20,301	.....	100	.....	91	269
	Central Coal Co.....	19,479	.....	11,870	.....	50	.....	47	244
	Echo C. & C. Co.....	18,082	.....	9,606	.....	82	.....	40	311
	Red Ash C. Co.....	31,199	.....	18,517	.....	89	.....	60	265
	Rush Run C. & C. Co.....	17,202	.....	9,370	.....	92	.....	92	107
	Beury C. & C. Co.....	19,700	.....	9,007	.....	60	.....	60	301
	Beechwood C. & C. Co.....	10,080	.....	5,400	.....	48	.....	30	300
	Alaska C. & C. Co.....	1,324	.....	2,810	.....	20	.....	16	300
	Harvey C. & C. Co.....	41,800	.....	26,000	.....	100	.....	100	200
	Collins Colliery Co.....	56,868	.....	32,400	.....	100	.....	98	300
	Macdonald Colliery Co.....	11,471	.....	7,028	.....	85	.....	40	146
	Quinnimont C. Co.....	37,132	.....	20,750	.....	90	.....	90	275
	Carbon C. & C. Co.....	403	.....	204	.....	12	.....	12	30
	Totals.....	.....	846,773	.....	481,699	.....	2,183	78	280

Table showing tons of Coal converted into Coke, tons of Coke produced, and number of Ovens in and out of use.—Continued.

COUNTY.	NAME OF COMPANY.	Tons of coal used in ovens (tons of 2,000 lbs.).	Total tons of coal used in county.	Tons of coke produced (tons of 2,000 lbs.).	Total tons of coke produced in county.	No. coke ovens reported.	Total No. of ovens reported in county.	Avg. No. ovens in use.	Avg. days ovens were worked.
Raleigh.....	Royal C. & C. Co.....	22,639		15,460		78		78	168
	Totals.....		22,639		15,460		78	78	168
McDowell	Tidewater C. & C. Co.	26,898		17,891		100		55	310
	Bottom Creek C. & C. Co... ..	35,253		19,715		100		68	240
	Peerless C. & C. Co.	52,662		35,519		154		74	300
	Empire C. & C. Co.	21,333		15,327		100		95	248
	Shawnee C. & C. Co.	51,133		28,536		100		80	200
	Eureka C. & C. Co.	50,872		31,082		114		85	365
	Pulaski Iron Co.	111,741		68,804		172		170	365
	Keystone C. & C. Co.	21,280		14,800		100		50	300
	Algoma C. & C. Co.	93,409		56,044		175		172	307
	Gilliam C. & C. Co.	56,488		31,523		100		80	240
	Rolfe C. & C. Co.	44,052		26,222		78		70	260
	Roanoke C. & C. Co.	47,279		28,365		100		80	365
	Indian Ridge C. & C. Co.	44,800		26,982		100		80	
	Arlington C. & C. Co.	50,424		22,665		100		70	298
	Greenbrier C. & C. Co.	53,132		31,613		100		80	300
	McDowell C. & C. Co.	43,418		28,950		100		96	365
	Ashland C. & C. Co.	46,044		28,480		200		90	300
	Elk Ridge C. & C. Co.	42,813		36,547		100		95	300
	Lynchburg C. & C. Co.	52,938		35,792		214		100	250
	Powhatan C. & C. Co.	82,457		46,014		154		135	311
	Upland C. & C. Co.	96,952		60,595		217		172	365
	Houston C. & C. Co.	71,949		45,342		150		130	300
	Crozer C. & C. Co.	141,300		101,365		300		275	313
	Turkey Gap C. & C. Co.	120,423		67,825		200		200	300
	Norfolk C. & C. Co.	66,864		39,800		176		120	300
	Norfolk C. & C. Co.	54,936		32,700		120		116	300
	Norfolk C. & C. Co.	27,553		16,400		100		60	300
	Shamokin C. & C. Co.	41,060		27,334		150		110	365
	Elkhorn C. & C. Co.	77,613		47,811		162		140	212
	Totals.....		1727076		1070033		4,036	105	300
Mercer.....	Mill Creek C. & C. Co.	78,460		46,835		150		120	300
	Coaldale C. & C. Co.	44,252		27,993		106		88	190
	Buckeye C. & C. Co.	40,206		22,439		100		75	311
	Caswell Creek C. & C. Co.	61,214		37,278		231		150	311
	Booth-Bowen C. & C. Co.	56,611		31,590		174		90	311
	Louisville C. & C. Co.	46,650		27,752		75		75	300
	Goodwill C. & C. Co.	23,447		13,390		95		46	340
	Totals.....		350,840		207,277		931	92	293

Table showing number of Coke Ovens not in use, by Counties.—1900.

NAME OF COUNTY.	No. of ovens not in use.	Field in which located.
Barbour.....	20	Upper Monongahela.
Harrison.....	60	Upper Monongahela.
Marion.....	137	Upper Monongahela.
Monongalia.....	5	Upper Monongahela.
Preston.....	1	Upper Monongahela.
Tucker.....	43	Upper Potomac.
Randolph.....	1	Upper Monongahela.
Kanawha.....	15	Kanawha.
Fayette.....	296	New River.
McDowell.....	888	Pocahontas.
Mercer.....	277	Pocahontas.
Total.....	1,743	

Table showing No. of Coke Ovens not in use.—1900.

NAME OF COUNTY.	NAME OF COMPANY.	No. of ovens not in use.	Field in which coke plants are located.
Barbour.....	Junior C. Co.....	20	Upper Monongahela.
Harrison.....	Globe C. & C. Co.....	17	" "
	Briar Hill C. & C. Co.....	2	" "
	Howard C. & C. Co.....	41	" "
Total.....		60	
Marion.....	W. Fairmont C. & C. Co.....	28	Upper Monongahela.
	Gaston Gas Coal Co.....	10	" "
	Montana C. & C. Co.....	33	" "
	Briar Hill C. & C. Co.....	6	" "
	The Monongah Co.....	40	" "
	Worthington C. & C. Co.....	20	" "
Total.....		137	
Monongalia.....	Briar Hill C. & C. Co.....	5	Upper Monongahela.
Total.....		5	
Preston.....	Austin Coal & Coke Co.....	1	Upper Monongahela.
Total.....		1	
Tucker.....	Cumberland Coal Co.....	35	Upper Potomac.
	Davis C. & C. Co.....	2	" "
	Davis C. & C. Co.....	2	" "
	W. Va. C. & P. Ry. (M. Dept).....	1	" "
	W. Va. C. & P. Ry. (M. Dept).....	1	" "
	W. Va. C. & P. Ry. (M. Dept).....	2	" "
Total.....		43	
Randolph.....	Junior Coal Co.....	1	Upper Monongahela.
Total.....		1	
Kanawha.....	Cannelton Coal Co.....	15	Kanawha.
Total.....		15	
Fayette.....	Longacre Colliery Co.....	50	New River.
	W. R. Johnson, Nos. 1 and 2.....	34	" "
	The St. Clair Co.....	16	" "
	The Mt. Carbon Co. Ltd.....	2	" "
	Gauley Mt. Coal Co.....	7	" "
	Nuttallburg C. & C. Co.....	33	" "
	Victoria C. & C. Co.....	2	" "
	Brooklyn Coal Co.....	3	" "
	Fire Creek C. & C. Co.....	6	" "
	Central Coal Co.....	3	" "
	Echo Coal & C. Co.....	42	" "
	Red Ash Coal Co.....	29	" "
	Beechwood C. & C. Co.....	18	" "
	Alaska C. & C. Co.....	4	" "
	Collins Colliery Co.....	2	" "
	Maedonald Colliery Co.....	45	" "
Total.....		296	
McDowell.....	Tidewater C. & C. Co.....	45	Pocahontas.
	Bottom Creek C. & C. Co.....	32	" "
	Peerless C. & C. Co.....	80	" "
	Empire C. & C. Co.....	5	" "
	Shawnee C. & C. Co.....	20	" "
	Eureka Coal & Coke Co.....	29	" "
	Pulaski Iron Co.....	2	" "
	Keystone C. & C. Co.....	50	" "
	Algoma C. & C. Co.....	3	" "
	Gilliam C. & C. Co.....	20	" "
	Rolie C. & C. Co.....	8	" "

Table showing number of Coke Ovens not in use—1900.

NAME OF COUNTY.	NAME OF COMPANY.	No. of ovens not in use.	Field in which coke plants are located.
McDowell.....	Roanoke C. & C. Co	20	Pocahontas.
	Indian Ridge C. & C. Co.....	20	"
	Arlington C. & C. Co.....	30	"
	Greenbrier C. & C. Co.	20	"
	McDowell C. & C. Co.....	4	"
	Ashland C. & C. Co.....	110	"
	Elk Ridge C. & C. Co.....	5	"
	Lynchburg C. & C. Co.....	114	"
	Powhatan C. & C. Co.....	19	"
	Upland C. & C. Co.....	45	"
	Houston C. & C. Co.....	20	"
	Crozer C. & C. Co.....	25	"
	Norfolk C. & C. Co.....	56	"
	Norfolk C. & C. Co.....	40	"
	Norfolk C. & C. Co.....	4	"
Mercer	Shamokin C. & C. Co.....	40	"
	Elkhorn C. & C. Co.....	22	"
	Total	888	
	Mill Creek C. & C. Co.....	20	Pocahontas.
	Coaldale C. & C. Co.....	18	"
	Buckeye C. & C. Co.....	25	"
	Caswell Creek C. & C. Co.....	81	"
	Booth-Bowen C. & C. Co.....	84	"
	Goodwill C. & C. Co.....	49	"
	Total.....	277	

CHAPTER IV.

MACHINE MINING.

Machine mining has become a large factor in the production of coal in the state. The production of 2,537,611 tons during the past year is in excess of the total production of coal in the entire state for the year 1882. The past year records the introduction of 100 additional machines and an increase of 22 firms, with an increase of 804,332 tons of machine coal.

Nicholas and Mercer Counties report no machines in use during the year, making a loss of two firms and nine machines. Harrison, Preston, Taylor, Putnam and Raleigh Counties appear for the first time in the list of machine mines.

Summary of the Production of Machine Mined Coal in the State.—1900.

COUNTY.	No. of firms using machines.	No. of machines used.	Production of machine mined coal (tons of 2240 lbs.)	No. of machine miners	No. of machine Runners and helpers.	Total machine men employed.	District in which located.	Remarks.
Barbour.....	3	14	.....	107	16	123	1	{ Recently installed
Harrison.....	2	3	.....	.....	.....	.....	1	
Marion.....	5	25	815,491	412	68	480	1	
Marshall.....	1	4	86,694	60	12	72	1	.....
Preston.....	3	8	125,911	75	16	91	1	.....
Taylor.....	1	7	142,296	120	14	134	1	.....
Kanawha.....	13	49	481,555	413	112	525	2	.....
Putnam.....	1	3	6,313	20	6	26	2	.....
Fayette.....	23	99	518,849	492	158	650	3	.....
Raleigh.....	1	1	.....	4	4	8	3	.....
Mingo.....	4	12	128,228	148	22	170	4	.....
McDowell.....	6	16	222,174	73	19	92	4	.....
Totals.....	63	241	2,537,611	1,924	447	2,371	.....	.....
Totals, 1899.....	41	141	1,733,279	1,323	273	1,596	.....	.....
Gain.....	22	100	804,332	601	174	775	.....	.....

1899-1900.

COUNTY.	NAME OF COMPANY.	No. of Mine Machines.	Tons of coal pro- duced (2,240).	No. of Machine Miners.	No. of Machine Runners and Helpers.	Total No. Men employed by machine min- ing.
Barbour.....	Philippi Coal Mining Co.	6	.....	47	8	55
	Laurel Hill C. & C. Co.	4	.....	10	.....	10
	Southern C. and Transportation Co.	4	.....	50	8	58
	Total.....	14	.....	107	16	123
Harrison	Solon-Lowry Mining Co.	2	.....	.....	.....	.....
	Meadow Brook C. & C. Co.	1	.....	.....	.....	.....
	Total.....	3	.....	.....	.....	.....
Marion	W. Fairmont C. & C. Co., N. Eng. mine	6	211,148	110	24	134
	Briar Hill C. & C. Co.	4	80,370	25	8	33
	The Monongah Co.	10	465,768	240	20	260
	Clark C. & C. Co.	2	25,049	12	6	18
	J. A. Clark C. Co.	3	33,156	25	10	35
	Total.....	25	815,491	412	68	480
Marshall	Glendale C. Co.	4	86,694	60	12	72
	Total	4	86,694	60	12	72
Preston.....	Merchants Coal Co.	3	100,000	50	6	56
	Irona C. Co.	3	14,911	19	6	25
	Oakland C. & C. Co.	2	11,000	6	4	10
	Total.....	8	125,911	75	16	91
Taylor.....	Flemington C. & C. Co.	7	142,296	120	14	134
	Total.....	7	142,296	120	14	134
Kanawha.....	Campbells Creek Coal Co.	6	29,582	50	12	62
	Virginia Mining Co.	2	14,763	17	12	29
	Kelleys Creek M. Co., B No. 4.	3	82,781	45	12	57
	Kelleys Creek M. Co., C. No. 2.	4	94,490	55	12	67
	Kelleys Creek M. Co., C. No. 3.	1	10,291	8	2	10
	Kelleys Creek M. Co., D. No. 4.	3	23,740	15	4	19
	Riverside Coal Co.	4	27,681	40	10	50
	Winifrede Coal Co.	5	27,113	37	10	47
	Stevens Coal Co.	7	37,234	30	10	40
	Kanawha Mining Co.	4	22,899	35	8	43
	Crown Hill Coal Co.	3	8,600	30	6	36
	Chesapeake Mining Co.	4	76,828	16	8	24
	Belmont Coal Co.	3	25,553	35	6	41
	Total.....	49	481,555	413	112	525
Pntnam	Marmet-Smith C. Mining Co.	3	6,313	20	6	26
	Total.....	3	6,313	20	6	26
Fayette.....	Longacre Colliery Co.	9	67,006	60	18	78
	Boomer C. & C. Co.	3	79,606	70	10	80
	Davis-Gordon Co.	4	42,500	20	6	26
	Mecca Coal and Coke Co.	3	14,824	25	8	33
	W. R. Johnson.	4	25,444	14	8	22
	Carver Brothers.	2	14,977	22	20	42
	Carver Brothers.	1	2,432	6	2	8
	The St. Clair Co.	2	3,100	.....	.....	.....
	Mt. Carbon Co., Ltd.	3	.....	.....	.....	.....
	Gt. Kanawha Colliery Co., Ltd.	4	34,475	30	9	39
	Gt. Kanawha Colliery Co., Ltd.	1	9,024	15	3	18
	Gt. Kanawha Colliery Co., Ltd.	1	14,571	10	2	12
	Gauley Mountain C. Co.	10	10,684	50	14	64

1899-1900.—Continued.

COUNTY.	NAME OF COMPANY.	No. of Mine Machines.	Tons of coal pro- duced (2,240 lbs).	No. of Machine Miners.	No. of Machine Runners and Helpers.	Total No. Men employed by machine min- ing.
Fayette.....	New River Mining.....	1	2,000	4	2	6
	Caperton Coal & Coke Co.	3	8,382	10	2	12
	Brooklyn Coal Co.....	7	27,701	26	8	34
	Red Ash Coal Co.....	12	59,269	28	12	40
	Rush Run C. & C. Co.....	7	21,522	12	8	20
	Macdonald Colliery Co.....	7	26,021	20	8	28
	Quinnimont Coal Co.....	2	.....	5	2	7
	Carbon Coal & Coke Co.....	1	420	10	2	12
	Raven C. & C. Co.....	2	3,600	30	4	34
	W. P. Kend.....	10	50,291	25	10	35
	Total.....	99	518,849	492	158	650
Raleigh.....	Raleigh Coal & Coke Co.....	1	.....	4	4	8
	Total.....	1	.....	4	4	8
Mingo.....	Logan Cons. Coal Co., Maritime.....	3	19,947	40	6	46
	Red Jacket Coal Co.....	2	8,170	20	4	24
	Logan Cons. Coal Co., Logan.....	5	94,218	80	10	90
	Pearl Coal Co.....	2	5,893	8	2	10
McDowell.....	Total.....	12	128,228	148	22	170
	Peerless Coal & Coke Co.....	2	21,106	8	3	11
	Pulaski Iron Co.....	5	31,500	10	2	12
	Indian Ridge C. & C. Co.....	2	40,709	.....	.....	.....
	Upland Coal & Coke Co.....	3	27,380	15	3	18
	Crozer Coal & Coke Co.....	2	77,479	32	9	41
	Norfolk C. & C. Co., Norfolk.....	2	24,000	8	2	10
	Total.....	16	222,174	73	19	92
Totals.....		241	2,537,611	1,924	447	2,371

Number and Kind of Mining Machine in Use in the State, 1900.

NAME OF COMPANY.	Electrical Mine Machines.					Compressed Air Mine Machines.			Total Machines.	Tons of coal produced by machines (tons of 2,240 lbs.)
	Jeffrey.	General Electric.	Morgan-Gardner.	Pittsburg M. M. Co.'s	Link Belt.	Sullivan.	Ingersoll-Sergeant.	Harrison.		
Philippi Coal Mining Co.....	6								6	
Laurel Hill C. & C. Co.....						4			4	
Southern C. & Transportation Co.....	4								4	
Solon-Lowery M. Co.....	2								2	
Meadow Brook C. & C. Co.....			1						1	
West Fairmont C. & C. Co. (N. E. Mine).....	6								6	211,148
Briar Hill C. & C. Co. (No 2).....	4								4	80,370
The Monongah Co.....			10						10	465,786
Clark Co. & C. Co.....							2		2	25,049
J. A. Clark Coal Co.....	3								3	33,156
Glendale Coal Co.....			4						4	86,694
Merchants Coal Co.....			3						3	100,000
Irona C. Co.....						3			3	14,911
Oakland C. & C. Co.....							2		2	11,000
Flemington C. & C. Co.....			7						7	142,296
Campbell's Creek C. Co.....	6								6	29,582
Virginia Mining Co.....			1			1			2	14,763
Kelley's Creek M. Co. (B No. 4).....			3						3	82,781
Kelley's Creek M. Co. (C No. 2).....			3			1			4	94,490
Kelley's Creek M. Co. (C No. 3).....			1						1	10,291
Kelley's Creek M. Co. (D No. 4).....			3						3	23,740
Riverside Coal Co.....	1		3						4	27,681
Winifrede Coal Co.....			4		1				5	27,113
Stevens Coal Co.....	7								7	37,234
Kanawha Mining Co.....			4						4	22,899
Crown Hill C. Co.....			1		2				3	8,600
Belmont Coal Co.....			3						3	25,553
Chesapeake M. Co.....			4						4	76,828
Marmet Smith C. M. Co.....			1		2				3	6,312
Longacre Colliery Co.....						3		6	9	67,006
Boomer C. & C. Co.....			3						3	79,606
Davis-Gordon Co.....	4								4	42,500
Mecca C. & C. Co.....			3						3	14,824
W. K. Johnson.....						2	2		4	25,444
Carver Brothers, (Gas No. 2).....			2						2	14,977
Carver Brothers (Eagle).....			1						1	2,432
The St. Clair Co.....	2								2	3,100
Mt. Carbon Co. L't'd.....						1		2	3	2,000
Gt. Kanawha Colliery Co. L't'd (No. 1).....	1		3						4	34,475
Gt. Kanawha Colliery Co. L't'd (Digby).....	1								1	9,024
Gt. Kanawha Colliery Co. L't'd (No. 5).....			1						1	14,571
Gauley Mountain C. Co.....								10	10	10,684
New River Mining Co.....	1								1	2,000
Caperton C. & C. Co.....			3						3	8,382
Brooklyn C. Co.....						1		6	7	27,701
Red Ash Coal Co.....								12	12	59,269
Rush Run C. & C. Co.....								7	7	21,522
MacDonald Colliery Co.....								7	7	26,021
Quinnimont C. Co.....			1		2				2	
Carbon C. & C. Co.....			1						1	420
Raven C. & C. Co.....			2						2	3,600
W. P. Rend.....	4							6	10	50,290
Raleigh C. & C. Co.....	1								1	
Logan Cons. C. Co., (Maritime).....						3			3	19,947
Red Jacket Coal Co.....						2			2	8,170
Logan Cons. C. Co., (Logan).....						5			5	94,218
Pearl Coal Co.....	2								2	5,893
Peerless C. & C. Co.....						2			2	21,106
Pulaski Iron Co.....	5								5	31,500
Indian Ridge C. & C. Co.....	2								2	40,709
Upland C. & C. Co.....	3								3	27,380
Crozer C. & C. Co.....	1								1	77,479
Norfolk C. & C. Co., (Norfolk).....					2				2	24,000
Total.....	1								241	

CHAPTER V.

WAGES PAID AND SELLING PRICE OF COAL AND COKE.

As stated in last year's report, no uniformity of wages prevails at the mines throughout the State. In many instances the miners are paid by the bushel of screened coal and in others by the ton, but in the greatest number by the car, the cars having capacities ranging from one to three tons.

In the table below the prices paid for mining are for a gross ton of run-of-mine coal.

WAGES PAID AND SELLING PRICE OF COAL AND COKE.
1900.

COUNTY.	Paid min- ers per ton of 2,240 lbs.	Track- men's daily wages.	Selling Price of.	
			Coal (ton of 2,240 lbs.)	Coke (ton of 2,000 lbs.)
Barbour.....	\$.40	\$ 1.53	\$.75	\$ 1.34
Brooke.....	.40	1.26	.89	.....
Hancock.....	.40	1.50	.95	.....
Harrison.....	.40	1.59	.84	2.65
Marrion.....	.45	1.69	.79	1.95
Marshall.....	.45	1.85	.74	.....
Mineral.....	.45	2.06	.....	.....
Monongalia.....	.37	1.55	.60	.95
Ohio.....	.42	1.73	.75	.....
Preston.....	.45	1.67	1.08	1.87½
Taylor.....	.30	1.49	.67	.....
Tucker.....	.38	2.04	1.10	1.20
Randolph.....	.50	1.75	.67	2.50
Kanawha.....	.40	1.65	.93	2.87½
Mason.....	.39	1.30	.89	.....
Putnam.....	.40	1.55	.70	.....
Fayette.....	.45	1.75	.78	2.21
Raleigh.....	.45	1.80	.82	1.95
Mingo.....	.40	1.72	.76	.....
McDowell.....	.35	1.99	.68	1.63
Mercer.....	.35	1.93	.67	1.59
Average.....	\$.4106	\$ 1.69	\$.75	\$ 1.75

In the following table an effort is made to show the wages paid machine men—miners, runners and helpers.

The machine miners are paid, mostly for run-of-mine coal, by the day, car and in some cases by the ton and bushel.

The machine runners and helpers are paid by the lineal foot of the face, by the ton, day and car.

The average price paid machine miners for the year is 31 1-5 cents per ton.

The average price paid machine runners is \$2.21 per day; 7 cts. per ton; 5 1-2 cts. per foot and 14 cts. per car.

The machine helpers receive \$1.78 per day; 6 cts. per ton and 3 cts. per foot.

SUMMARY OF WAGES PAID MACHINE MINERS, RUNNERS AND HELPERS, 1900.

COUNTIES.	Paid machine miners.			Machine Runners.	Machine Runners paid by.	Machine Helpers	Machine Helpers paid by.
	R. of M.	By weight measure.	Equiv. to 2,240 lbs.				
Barbour.....	\$.33	2240lb.	\$.33	\$ 2.25	Day	\$ 1.70	Day.
Harrison.....	.29 1/2	"	.29 1/2	.07 1/2	Ton.	.....	.....
Marion.....	.28	"	.28	.06	"	.....	.....
Marshall.....	.43 1/2	"	.43 1/2	.09	"	.....	.....
Preston.....	.32 2/3	"	.32 2/3	.06	"	.06	Ton.
				.14	Car.	.....	.....
Taylor.....	.29 1/2	"	.29 1/2	2.50	Day.	1.75	Day.
Kanawha.....	.42	"	.42	2.33	"	2.00	"
				2.11	"	1.78	"
				.06	Foot.	.....	.....
Putnam.....		"		2.10	Day.	2.00	"
Fayette.....	.27	"	.27	.05	Foot.	.03	Foot.
				2.12	Day.	1.67	Day.
Raleigh.....		"		2.00	"	1.75	"
Mingo.....	.24 7/8	"	.24 7-8	2.41	"	1.76	"
McDowell.....	.23 3-5	"	.23 3-5	2.12	"	1.66	"
Average.....	\$.31 1-5	"	\$.31 1-5	\$ 2.21	"	\$ 1.78	"
				.07	Ton.	.06	Ton.
				.05 1/2	Foot.	.03	Foot.
				.14	Car.	.....	.....

WAGES PAID MACHINE MINERS, RUNNERS AND HELPERS IN W. VA., 1899-1900.—Continued.

COUNTIES.	Paid Machine Miners.						Machine Runners.	Machine Runners paid by.	Machine Helpers.	Machine Helper paid by.
	R. of M.	Per Day.	Per Car.	By Weight Measure.	Bushels in Cars.	Equiv to 2,240 lbs.				
Fayette—Continued ...	.47½	.....	.....	2000lb	.....	.53½	\$.....	day.	\$.....	day.
	.30	.....	.....	2240lb	.....	.30	2 00	"	1 75	"
	.21	.....	.....	2000lb	.....	.23	2 20	"	1 75	"
	.....	.....	.....	.....	.....	.....	2 20	"	1 70	"
	.35	.....	.....	2240lb	.....	.35	2 25	"	1 65	"
	.....	.....	.....	.....	.....	.....	2 20	"	1 50	"
Average.....	.....	.....	.....	.....	.....	.27	.....	.....	.....	.....
Raleigh .....	.....	da.....	.....	.....	.....	.....	2 00	day.	1 75	day.
Average.....	.....	.....	.....	.....	.....	.....	2 00	day.	1 75	day.
Mingo.....	.31½	.....	car.	.....	42	.21	2 40	day.	1 75	day.
	.31½	.....	car.	.....	"	.21	2 50	"	1 85	"
	.31½	.....	car.	.....	"	.21	2 50	"	1 85	"
	.36½	.....	.....	2240lb	.....	.36½	2 25	"	1 60	"
Average.....	.....	.....	.....	.....	.....	.24 7 8	2 41	day.	1 76	day.
McDowell .....	.35	.....	car.	.....	56	.17½	2 00	day.	1 40	day.
	.35	.....	car.	.....	56	.17½	2 25	"	1 75	"
	.15	.....	.....	2240lb	.....	.15	2 10	"	1 75	"
	.35	.....	.....	.....	.....	.35	2 15	"	1 85	"
	.46	.....	car.....	.....	56	.23	2 13	"	1 55	"
Average.....	.....	.....	.....	.....	.....	.23 3-5	2 12	day.	1 66	day.

CHAPTER VI.

TRANSPORTATION OF COAL AND COKE.

The tonnage of coal and coke handled by the railroads in the state, coming from the West Virginia mines, as reported by the railroad officials, is tabulated in the table below. The quantities of coal and coke in the column "Total tons handled" are not in accord with the quantities shipped as reported by the coal operators. The quantity of coal reported shipped from the mines is 16,531,963 tons while the total tons handled by the railroads are 15,574,602. Practically the entire tonnage of the coke manufactured is shipped from the plants. There were manufactured 2,496,107 tons but the railroads show that 2,861,564 tons were handled. This may be accounted for by two or more roads handling the same product. In the case of the coal shortage it is probably due to the tonnage consumed not being reported as a part of the total coal handled.

Statement of the Tonnage of Coal and Coke from the Collieries in W. Va. handled and transported by the Railroads in the State during the twelve months ending June 30th, 1900.

[Quantities are expressed in Tons of 2,000 lbs.]

Name of Railroad Company.	Total tons of coal handled.	Total tons of coke handled.	Tons originating on the line.		Tons delivered to the line by other railroads in West Virginia.		Tons delivered to other lines in West Virginia.		Tons of W. Va. fuel cons'nd by the line in the State.		Railroads and docks to which the product is delivered for distribution.	Points of destination of the product.	
			Coal.	Coke.	Coal.	Coke.	Coal.	Coke.	Coal.	Coke.		East.	West.
Baltimore & Ohio.....	4,832,853	629,568	3,861,539	348,933	971,314	280,635					Locust Point, Cleveland, Sandusky.	Philadelphia, Baltimore, Atlantic Coast.	Chicago, Lake Ports, Northwest.
W. Virginia Central & Pgh.....	1,729,568	315,283	1,706,446	315,283	23,121		92,179	27,445	71,196	78	B. & O. R. R., Pa. R. R., C. & O. Canal at Cumberland, Md.	Wash., Balt. Phil. S. Amboy, Port Reading, N. J., etc., etc.	Chicago, St. Louis, Sandusky, Cleveland and other points.
Kanawha & Michigan.....	713,811	51,194	682,711	45,234	59,112	8,960			21,988		Various R. R., T. & O. C. Docks, at Toledo, O.	Atlantic Coast cities.	Toledo, Chicago and various Lake ports.
Chesapeake & Ohio.....	4,116,970	562,970	4,098,370	562,427	18,600		50,099	300	406,151		C. & O. docks at Newport News and various railroads.	Coastwise, N. England and New York points.	Cincinnati, Louisville, Toledo, Chicago and various other points.
Norfolk & Western.....	4,181,400	1,299,549	180,551	1,297,808	849	1,741	2,896	453	no rec.		Lambert Pt. piers, Toledo & Sandusky docks, S. A. L., A. C. L., So. Ry. L. & N. Ry. & Ohio Cen.	Tidewater, foreign Ports & Atlantic coast inland, Va., N. & S. Carolina ports.	Cincinnati, lake points, Chicago and western cities.
Totals.....	15,574,602	2,861,564	10,479,617	2,569,685	1,072,996	291,336	145,174	28,198	499,338	78			

CHAPTER VII.

POWDER USED IN THE MINES.

One hundred and sixty-seven mine operations consumed 171,010 kegs of powder—(2,138 tons) in winning 13,760,435 tons of coal, or 81 tons per keg of powder used. At the rate of 81 tons per keg there would have been 62,290 kegs used in winning the remainder of the coal production of 5,126,476 tons, making the total powder used at all mines in the state 234,300 kegs or 2,928 tons. This powder was sold to the miners at prices ranging from \$1.45 to \$2.13 per keg,—the average price being \$1.77 per keg.

The subjoined table exhibits the powder used in the several counties and the price per keg.

Number of Kegs of Powder Reported Used at Mines During 1899-1900, by Counties.

NAME OF COUNTY.	No. operations reported.	Tons of Coal. (2240 lbs.)	Kegs of Powder.	Tons per Keg Used.	Cost per Keg to Miner.
Barbour.....	2	71,080	931	76	1 63
Brooke.....	2	79,764	445	89	1 69
Hancock.....	1	107	5	21	1 50
Harrison.....	7	241,720	2,072	126	1 64
Marion.....	7	1,380,997	18,569	74	1 78
Marshall.....	2	1,8,974	809	74	1 70
Mineral.....	3	241,704	1,148	210	1 75
Monongalia.....	1	46,950	500	93	1 80
Ohio.....	2	66,697	290	229	1 61
Preston.....	5	379,605	3,700	102	1 54
Taylor.....	1	213,446	2,000	106	1 45
Tucker.....	5	936,874	18,000	52	2 00
Randolph.....	2	98,682	1,711	57	1 58
Kanawha.....	29	1,139,467	13,284	83	1 90
Mason.....	6	62,427	1 674	37	1 71
Putnam.....	1	130,476	3,340	39	2 00
Fayette.....	42	3,113,871	33,751	92	2 04
Raleigh.....	3	68,360	1,096	85	2 13
Mingo.....	12	465,595	5 544	84	1 88
McDowell.....	27	3,868,202	46,100	84	2 00
Mercer.....	7	1,045,437	16,090	65	2 00
Totals.....	167	13,760,435	171,010	81	1 77

Average number of tons of coal produced per keg, 81.

Average price per keg of powder to miners, \$1.77.

CHAPTER VIII.

STRIKES AT THE COAL MINES.

During the year there were several strikes at different mines principally over local conditions such as objections to screens, mine cars and in one case to the employment of a mine boss.

Two strikes of importance occurred in Fayette county on New River and Loup Creek. The first lasted about one month during September and October, 1899, and affected about 30 mines. This was caused by a refusal of the companies to grant an advance of 5 cents per ton for mining. The New River miners resumed at their former wages and the Loup Creek miners were granted the advance.

In April, 1900, another strike occurred on Loup Creek lasting about 20 days and affecting five mines. This was for a demand of 10 cents advance on mining. The men resumed at 5 cts. advance. For details of strikes see subjoined table.

Strikes at Coal Mines During the Year Ending June 30, 1900.—Continued.

County.	Name of Mine.	Date of beginning.	Date of termination.	Days idle.	Men affected.	Total days lost.	Cause of strike.	How settled.	Remarks.
Fayette—Con	Alaska.....	Sept. 20, '99	Oct. 15, '99	35	90	3,150	Demanded advance.....	Resumed at former prices....	
	Harvey.....	Sept. 1, '99	Oct. 1, '99	30	270	4,050	" 10c "	Giving advance 5c per ton	
	Star.....	Sept. 1, '99	Oct. 1, '99	30	135	4,050	" 10c "	" 5c "	
	Star.....	Apr. 1, '00	Apr. 21, '00	20	135	2,700	" 10c "	" 5c "	
	Sun.....	Sept. 1, '99	Sept. 21, '99	20	175	3,500	" 5c "	" 5c "	
	".....	Apr. 1, '00	Apr. 19, '00	18	175	3,150	" 10c "	" 5c "	
	Dunn Loop No. 1 & 2.....	Sept. 1, '99			275		" an "	" 10 per cent.	
	Dunn Loop No. 1 & 2.....	Apr. 1, '00			280		" " "	" 7½ per cent	
	Turkey Knob.....	Sept. 10, '99	Oct. 1, '99	21	135	2,835	" 5c "	" 5c per ton ..	
	Turkey Knob.....	Apr. 1, '00	Apr. 30, '00	29	135	3,915	" 10c "	" 5c "	
	Macdonald Apr. 1, '00	Apr. 20, '00		19	250	4,750	" an "	" 5c "	
	Sugar creek Sept. 1, '99	Sept. 3, '99		2	135	270	Struck for 40c per ton	Advance of 10 per cent.	
	" Sept. 10, '99	Sept. 14, '99		4	135	540	" " "	Resumed at 41½c car.....	
	" May 1, '00	May 19, '00		18	135	2,430	" 56c " car.....	" 47½ " "	
Raleigh	Big Q&No 3 Sept. ..., '99	Oct. 20, '99			175		" increase.....	" old scale.....	
	Royal.....	Sept. 21, '99	Oct. 27, '99	36	145	5,220	" increase of 5c.....	" " "	
Mingo.....	Logan.....	Aug. 16, '99	Aug. 27, '99	11	190	2,090	" " of wages	" " "	Wages increased Jan. 1, 1900 and Apr. 1, 1900.
	Lynn.....	May ..., '00			35		" " " "	" adv. of 20 pr. ct	
Mingo C.M. Co.	Mingo C.M. Co.						To compel miners to use better grade of oil in mines		
	Thacker.....	May ..., '00			50		Demanded advance.....	Resumed at adv. of 20 pr. ct	
Grapevine.	Grapevine.				152		Demanded adv. of 10c pr. car	" " old scale.....	
					25				

CHAPTER IX.

*Summary of the men employed at the mines and coke ovens,
by Counties.*

1900.

COUNTY.	No. of mines.	No. of coke plants.	Days mines worked.	Days ovens worked.	Men employed.						Total No. men employed.
					Pick Miners.	Machine miners.	Machine runners & helpers.	Others inside of mines.	Outside day hands.	On coke ovens.	
Barbour.....	6	1	207	290	112	107	16	70	65	12	382
Brooke.....	3	.....	288	.....	87	.....	.....	16	15	.....	118
Hancock.....	4	.....	218	.....	39	.....	.....	15	10	.....	64
Harrison.....	25	4	249	158	879	.....	.....	169	151	23	1222
Marion.....	23	9	312	318	1517	412	68	476	338	251	3062
Marshall.....	4	.....	223	.....	150	60	12	53	38	.....	313
Mineral.....	7	.....	301	.....	460	.....	.....	58	62	.....	580
Monongalia.....	2	2	248	244	65	.....	.....	12	10	20	107
Ohio.....	4	.....	304	.....	128	.....	.....	27	19	.....	174
Preston.....	12	2	270	300	273	75	16	66	40	32	502
Taylor.....	6	.....	239	.....	264	120	14	71	68	.....	537
Tucker.....	9	6	307	298	911	.....	.....	239	71	238	1459
Randolph.....	3	1	253	106	82	.....	.....	17	23	14	136
Kanawha.....	63	2	222	272	1486	413	112	441	304	28	2797
Mason.....	8	.....	189	.....	206	.....	.....	40	46	.....	292
Putnam.....	3	.....	226	.....	295	20	6	28	118	.....	467
Fayette.....	86	28	247	280	4324	492	158	1418	767	772	7931
Raleigh.....	3	1	176	168	95	4	4	30	38	17	188
Mingo.....	12	.....	240	.....	371	148	22	136	74	.....	751
McDowell.....	33	29	260	300	2538	73	19	1011	430	1631	5511
Mercer.....	9	7	297	293	676	.....	.....	332	120	334	1462
Totals.....	325	92	Avg. 261	Avg. 264	14723	1924	447	4726	2815	3382	28017

Summary of the Number of Men Employed, Days Worked, Kinds of Ventilation, Etc., by Counties for the
Year Ending June 30, 1900.

COUNTY.	No. Mines Operated.	No. Pick Miners Employed.	No. Machine Miners.	Other Inside Employes.	No. Coke Em- ploys.	Other Outside Employes.	Total Inside Em- ploys.	Total Outside Em- ploys.	Total No. Men Employed.	No. Coke Plants Operated.	No. of Fans.	No. of Furnaces.	No. of Natural Ventilations.	No. Ventilations by Steam Jet, Fire Basket,
Barbour.....	9	112	123	70	12	65	305	77	382	1	2	1	1	2
Brooke.....	3	87	16	16	.....	15	103	15	118	.....	.....	3	3	.....
Hancock.....	4	39	.....	15	.....	10	54	10	64	.....	1	1	1	1
Harrison.....	25	879	169	169	23	151	1,048	174	1,222	4	8	8	6	.....
Marion.....	22	1,517	480	476	251	338	2,473	589	3,062	9	14	1	1	.....
Marshall.....	4	150	72	53	.....	38	275	38	313	.....	.....	1	1	.....
Mineral.....	7	460	.....	58	.....	62	518	62	580	.....	.....	.....	.....	.....
Monongalia.....	2	65	.....	12	20	10	77	30	107	2	.....	.....	2	.....
Ohio.....	4	128	.....	27	.....	19	155	19	174	.....	3	2	1	1
Preston.....	12	273	91	66	32	40	430	72	502	2	3	2	1	.....
Taylor.....	6	264	134	71	.....	68	469	68	537	.....	5	1	4	.....
Tucker.....	9	911	.....	239	238	71	1,150	309	1,459	6	5	.....	.....	.....
Randolph.....	3	82	.....	17	14	23	99	37	136	1	.....	3	1	.....
Kanawha.....	63	1,486	525	414	38	304	2,455	342	2,797	2	19	13	6	.....
Mason.....	8	206	.....	40	.....	46	246	46	292	.....	2	.....	.....	.....
Putnam.....	3	295	26	28	.....	118	349	118	467	.....	2	1	1	.....
Fayette.....	86	4,324	650	1,418	772	767	6,392	1,339	7,931	28	32	24	23	1
Raleigh.....	3	95	30	17	.....	38	133	55	188	1	1	1	.....	.....
Mingo.....	12	371	170	136	.....	74	677	74	751	.....	.....	11	.....	.....
McDowell.....	32	2,338	92	1,011	1,631	430	3,441	2,070	5,511	29	31	.....	.....	.....
Mercer.....	6	676	.....	332	334	120	1,008	454	1,462	7	9	.....	.....	.....
Totals.....	325	11,723	2,371	4,726	3,382	2,815	21,820	6,197	28,017	92	137	77	49	5

Summary of the tables giving number of employees, men killed and injured, ovens, days mines and ovens worked and acres worked out.

1899-1900

COUNTY.	No. mines reported.	Employees.											No. men injured non-fatally.	No. men killed.	No. mules and horses.	Total No. coke ovens.	No. days mines were operated.	No. days ovens were op-erated.	Acres of coal worked out.
		Inside.			Outside.					Sum total.									
		Miners.	Labor-ers.	Total.	Labor-ers.	Coke work-ers.	Total.												
Barbour.....	6	219	86	305	65	12	77	382	.....	.....	.....	2	42	36	297	290	10.57
Brooke.....	3	87	16	103	15	.....	15	118	.....	.....	.....	.....	9	.....	258	.....	11.40
Hancock.....	4	39	15	54	10	.....	10	61	.....	.....	.....	1	10	.....	218	.....	8.61
Harrison.....	25	879	169	1048	151	23	174	1222	2	4	90	128	219	158	219	158	69.70		
Marion.....	23	1929	541	2470	358	251	589	3062	10	13	271	752	312	318	312	318	323.24		
Marshall.....	4	210	65	275	38	.....	38	313	.....	.....	29	.....	223	.....	223	.....	35.78
Mineral.....	7	460	58	518	62	.....	62	580	3	.....	.....	.....	301	.....	301	.....	64.00
Monongalia.....	2	65	12	77	10	20	30	107	.....	.....	12	55	248	214	248	214	9.58
Ohio.....	4	128	27	155	19	.....	19	171	.....	.....	24	93	270	300	270	300	18.93
Preston.....	12	348	82	430	40	32	72	562	3	1	43	93	270	300	270	300	49.87		
Taylor.....	6	384	85	469	68	.....	68	537	4	1	55	.....	239	307	239	307	41.87
Tucker.....	9	911	239	1150	71	238	309	1459	9	10	117	679	307	298	307	298	139.93		
Randolph.....	3	82	17	99	23	14	37	136	1	.....	9	50	253	106	253	106	12.20	
Kanawha.....	63	1899	556	2455	304	38	342	2797	16	3	378	107	222	272	222	272	274.21		
Mason.....	8	296	40	336	46	.....	46	292	1	1	39	.....	189	.....	189	.....	21.58
Putnam.....	3	315	34	349	118	.....	118	467	3	1	62	.....	226	247	226	247	29.31
Payette.....	86	4816	1576	6392	767	772	1539	7831	35	67	790	2183	247	168	247	168	859.31		
Raleigh.....	3	99	34	133	38	17	55	188	.....	.....	19	78	176	168	176	168	14.23
Mingo.....	12	519	138	657	74	.....	74	751	8	2	77	.....	240	.....	240	.....	75.57
McIntosh.....	33	2411	1030	3441	439	1031	2070	5511	63	30	390	4036	260	300	260	300	457.25		
Mercer.....	9	676	332	1008	120	331	451	1162	18	4	116	931	297	293	297	293	111.61		
Totals.....	325	16647	5173	21820	2815	3382	6197	28017	176	141	2614	9128	5486	3927	5486	3927	2638.78		

Average days worked at mines 261; at ovens 264.

MEN EMPLOYED, BY COUNTIES, 1900.

NAME OF COUNTY.	Employees.						
	Inside.			Outside.			Total Men Employed.
	Miners.	Laborers.	Total.	Laborers.	Coke Workers.	Total.	
Barbour.....	219	86	305	65	12	77	382
Brooke.....	87	16	103	15	.....	15	118
Hancock.....	39	15	54	10	.....	10	64
Harrison.....	879	169	1,048	151	23	174	1,222
Marion.....	1,929	544	2,473	338	251	589	3,062
Marshall.....	210	65	275	38	.....	38	313
Mineral.....	466	58	518	62	.....	62	580
Monongalia.....	65	12	77	10	20	30	107
Ohio.....	128	27	155	19	.....	19	174
Preston.....	348	82	430	40	32	72	502
Taylor.....	384	85	469	68	.....	68	537
Tucker.....	911	239	1,150	71	238	309	1,459
Randolph.....	82	17	99	23	14	37	136
Kanawha.....	1,899	556	2,455	304	38	342	2,797
Mason.....	206	40	246	46	.....	46	292
Putnam.....	315	34	349	118	.....	118	467
Fayette.....	4,816	1,676	6,392	767	772	1,539	7,931
Raleigh.....	99	34	133	38	17	55	188
Mingo.....	519	158	677	74	.....	74	751
McDowell.....	2,411	1,030	3,441	459	1,631	2,070	5,511
Mercer.....	676	332	1,008	120	334	454	1,462
Totals.....	16,647	5,173	21,820	2,815	3,382	6,197	28,017

DETAIL OF MEN EMPLOYED AT THE MINES, 1900.

NAME OF MINE.	NAME OF COMPANY.	Employees.										
		Inside.			Outside.			No. days mines operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules and horses inside.	
		Miners.	Laborers.	Total.	Laborers.	Coke Workers.	Total.					
BARBOUR COUNTY.												
Junior No. 1.	Junior C. Co.	50	8	58	5	12	17	210	290	16	8	
Kelly.....	Phillippi C. M. Co.....	53	40	93	21	.....	21	.....	.....	.....	16
Arden.....	Tygarts Valley C. & C. Co.....	30	4	34	6	.....	6	253	.....	.....	3
Custer.....	Laurel Hill C. & C. Co.....	20	15	35	25	.....	25	.....	.....	.....	.....
Arden.....	Laurel Creek C. Co.....	12	1	13	2	.....	2	75	.....	.....	1
Berryburg No. 1.....	Southern C. & Transp't'n Co..	54	18	72	6	.....	6	.....	.....	.....	4
Totals.....		219	86	305	65	12	77	.....	.....	16	42
BROOKE COUNTY.												
Blanche.....	Panhandle C. Co.....	35	8	43	4	.....	4	285	.....	.....	5
Gilchrist.....	Gilchrist C. Co.....	30	4	34	7	.....	7	289	.....	.....	4
Wellsburg.....	J. W. M. Carmichael.....	22	4	26	4	.....	4	300	.....	.....	.....
Totals.....		87	16	103	15	.....	15	.....	.....	.....	9
HANCOCK COUNTY.												
Sligo.....	Mack Mfg. Co.....	7	1	8	1	.....	1	40	.....	.....	.....
Marquet No. 1.....	Marquet Coal Co.	16	8	24	6	.....	6	300	.....	.....	5
Marquet No. 2.....	Marquet C. Co.....	10	4	14	1	.....	2	210	.....	.....	4
McElfresh.....	McElfresh Fire Clay Co.....	6	2	8	.....	.....	.....	150	.....	.....	1
Totals.....		39	15	54	10	.....	10	.....	.....	.....	10

DETAIL OF MEN EMPLOYED AT THE MINES, 1900.— Continued.

NAME OF MINE.	NAME OF COMPANY.	Employees.										
		Inside.			Outside.			No. days mines operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules and horses inside.	
		Miners.	Labor-ers.	Total.	Labor-ers.	Coke workers.	Total.					
HARRISON COUNTY.												
Worthington No. 2.	Worthington C. & C. Co.....	40	5	45	20	.....	20	300	.....	.....	7
Farnum.....	Globe C. & C. Co.....	30	5	35	6	5	11	173	60	12	5	
Jackson No. 1.....	Pinnickinnick C. Co.....	125	25	150	10	.....	10	265	.....	.....	15
Fall Run No. 2.....	Pinnickinnick C. Co.....	50	10	60	5	.....	5	175	.....	.....	6
Maulsby.....	Briar Hill C. & C. Co.....	25	3	28	4	.....	4	100	.....	.....	2
Harbert.....	Briar Hill C. & C. Co.....	12	3	15	1	.....	1	.....	.....	.....	2
Gypsy.....	Briar Hill C. & C. Co.....	24	3	27	4	.....	4	75	.....	.....	2
Enterprise.....	Briar Hill C. & C. Co.....	110	22	132	12	.....	12	305	.....	.....	12
Farnum.....	Briar Hill C. & C. Co.....	45	10	55	9	7	16	297	274	20	7	
Glen Falls.....	Glenn Falls C. & C. Co.....	40	8	48	7	.....	7	162	.....	.....	5
Howard.....	Howard C. & C. Co.....	58	16	74	9	6	15	230	147	9	6	
No. 2.....	Despard Gas C. Co.....	30	9	39	4	.....	4	170	.....	.....	8
Nos. 1 and 2.....	West Fork M. Co.....	35	6	41	4	.....	4	300	.....	.....	4
Fairmore.....	Fairmont & Balt. C. & C. Co.....	65	8	73	6	5	11	160	120	27	.....
Lynch.....	Hutchinson C. Co.....	35	.....	35	15	.....	15	79	.....	.....	2
Ocean.....	Cle'lnd & F'irmn't C. & C. Co.....	40	10	50	5	.....	5	150	.....	.....	.....
Columbia.....	Columbia C. & C. Co.....	56	10	66	5	.....	5	140	.....	.....	.....
Riverdale.....	Riverdale M. Co.....	6	1	7	.....	.....	.....	.....	.....	.....	2
Viropa.....	Viropa C. & C. Co.....	4	.....	4	.....	.....	.....	.....	.....	.....	2
Meadow Brook.....	Solon-Lowery M. Co.....	10	15	25	5	.....	5	.....	.....	.....	2
Dolan.....	Meadow Brook C. & C. Co.....	40	.....	40	20	.....	20	79	.....	.....	2
	Hutchinson Fuel Co.....	5	.....	5	.....	.....	.....	79	.....	.....	1
	Totals.....	879	169	1048	151	23	174	.....	.....	68	90
MARION COUNTY.												
W. Fairmont Shaft.	West Fairmont C. & C. Co.....	185	45	230	29	8	37	311	365	36	27	
New England.....	" " " ".....	260	89	349	46	23	69	311	365	80	33	
Gaston.....	Gaston Gas C. Co.....	196	32	228	28	30	58	300	300	80	45	
Montana.....	Montana C. & C. Co.....	175	52	227	42	39	81	300	365	125	42	
Aurora.....	Montana C. & C. Co.....	25	8	33	4	.....	4	219	.....	.....	7
Luther.....	Mason C. & C. Co.....	47	10	57	10	25	35	311	311	50	6	
Murray.....	Briar Hill C. & C. Co.....	75	39	114	30	12	42	306	312	30	15	
King.....	Va. & Pittsburg C. & C. Co.....	55	9	64	8	14	22	275	275	44	7	
Monongah 2, 3 & 5.....	The Monongah Co.....	465	163	628	98	80	178	295	261	120	42	
Anderson.....	Clark C. & C. Co.....	102	26	128	6	.....	6	250	.....	.....	.....
Chieftain.....	J. A. Clark C. Co.....	125	30	155	10	.....	10	250	.....	.....	.....
Pennois.....	Pennois C. & C. Co.....	60	10	70	7	.....	7	270	.....	.....	6
Worthington No 1.....	Worthington C. & C. Co.....	75	10	85	10	20	30	311	311	50	22	
Highland.....	Highland C. & C. Co.....	64	21	85	10	.....	10	293	.....	.....	14
Palatine.....	Palatine C Co.....	20	.....	20	.....	.....	.....	.....	.....	.....	5
	Totals.....	1929	544	2473	338	251	589	.....	.....	615	274
MARSHALL COUNTY.												
Boggs Run.....	Boggs Run M. & Mfg. Co.....	35	11	46	6	.....	6	268	.....	.....	7
Benwood.....	Wheeling Steel & Iron Co.....	25	13	38	7	.....	7	224	.....	.....	12
Glendale Shaft.....	Glendale C. Co.....	70	32	102	15	.....	15	.....	.....	.....	10
Moundsville.....	Moundsville C. Co.....	80	9	89	10	.....	10	200	.....	.....	.....
	Totals.....	210	65	275	38	.....	38	.....	.....	.....	29
MINERAL COUNTY.												
Hampshire.....	Davis C. & C. Co.....	80	11	91	14	.....	14	305	.....	.....	7
Savage.....	" " " ".....	80	13	93	16	.....	16	301	.....	.....	7
Windom.....	" " " ".....	80	11	91	13	.....	13	293	.....	.....	8
Elk Garden.....	W. Va. C. & Pgh. Ry. Co.....	220	23	243	19	.....	19	265	.....	.....	27
	Totals.....	460	58	518	62	.....	62	.....	.....	.....	49

DETAIL OF MEN EMPLOYED AT THE MINES, 1900.—*Continued.*

NAME OF MINE.	NAME OF COMPANY.	Employees.										
		Inside.			Outside.			No. days mine operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules and horses inside.	
		Miners.	Laborers.	Total.	Laborers.	Coke workers.	Total.					
MONONGALIA CO.												
Opekiska.....	Opekiska C. & C. Co.....	30	2	32	2	5	7	313	313	20	4	
Beechwood	Briar Hill C. & C. Co.....	35	10	45	8	15	23	208	200	30	8	
	Totals.....	65	12	77	10	20	30			50	12	
OHIO COUNTY.												
Whitaker	T. E. Kasley & Son.....	17	5	22	3		3	250			6	
Richland.....	Richland C. Works.....	45	9	54	4		4	227			5	
Elm Grove.....	Elm Grove C. Co.....	51	5	56	9		9	365			5	
La Belle	La Belle Iron Works.....	15	8	23	3		3	365			8	
	Totals.....	128	27	155	19		19				24	
PRESTON COUNTY.												
Austin.....	Austin C. & C. Co.....	60	3	63	5	22	27	300	300	82	7	
Gorman No. 1.....	Gorman C. & C. Co.....	40	5	45	4		4	128			4	
South Side No. 2 & 3	Merchants C. Co.....	50	16	66	4		4	200			10	
North Side No. 1.....	" " " " " " " " " "	100	17	117	8		8	365			10	
Irona.....	Irona Coal Co.....	84	19	103	9		9	268			8	
Oakland.....	Oakland C. & C. Co.....	14	22	36	10	10	20	300	300		4	
	Totals.....	348	82	430	40	32	72			82	48	
TAYLOR COUNTY.												
Grafton	Grafton C. & C. Co.....	67	10	77	11		11	198			6	
Sandlick.....	Grafton C. & C. Co.....	37	9	46	7		7	262			6	
Flemington.....	Flemington C. & C. Co.....	180	54	234	40		40	260			35	
New York.....	New York C. & C. Co.....	80	9	89	6		6	250			5	
Foster.....	B. F. Radabaugh & Co.	20	3	23	4		4	100			3	
	Totals.....	384	85	469	68		68				55	
TUCKER COUNTY.												
Douglas.....	Cumberland C. Co.....	125	25	150	15	30	45	311	311	160	22	
Thomas Drift.....	Davis C. & C. Co.....	400	45	445	20	10	30	305	311	20	26	
Thomas Shaft.....	" " " " " " " " " "	100	30	130	14	20	34	305	311	60	20	
Coketon No. 1.....	W. Va. C. & P. Ry. (M. Dept.)	31	12	43	3	24	27	300	274	60	4	
Coketon No. 2.....	" " " " " " " " " "	124	54	178	10	62	72	309	297	146	22	
Coketon No. 3.....	" " " " " " " " " "	131	73	204	9	92	101	211	297	250	23	
	Totals.....	911	239	1150	71	238	309			696	117	
RANDOLPH COUNTY												
Randolph.....	Randolph C. Co.....	40	9	49	14		14	274			5	
Harding No. 1.....	Junior C. Co.....	30	4	34	3	14	17	263	106	49	2	
Belington.....	Maryland Smokeless C. Co.....	12	4	16	6		6	184			2	
	Totals.....	82	17	99	23	14	37			49	9	
KANAWHA COUNTY												
Queen Shoal.....	Elk River C. & C. Co.....	9	2	11				242			1	
Falling Rock.....	Falling Rock Cannel C. Co.....	15	2	17	5		5	311			1	
Graham.....	Graham C. Co.....	35	2	37	1		1	180			3	
	F. C. Williams & Co.....											
Spring Fork.....	Campbells Creek C. Co.....	90	41	131	3		3	210			36	

DETAIL OF MEN EMPLOYED AT THE MINES, 1900.— Continued.

NAME OF MINE.	NAME OF COMPANY.	Employees.										
		Inside.			Outside.			No. days mine operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules and horses inside.	
		Miners.	Laborers.	Total.	Laborers.	Coke Workers.	Total.					
KANAWHA COUNTY —Continued.												
New Mine.....	Campbells Creek C. Co.	100	29	129	12	.....	12	210	.....	.....	31
White.....	White & Calderwood.....	7	5	12	.....	.....	.....	.....	.....	.....	3
Black Diamond.....	New Diamond C. Co.	45	5	50	6	.....	6	.....	.....	.....	5
Quincy.....	Quincy C. Co.	10	.....	10	4	.....	4	.....	.....	.....	3
Peabody.....	Peabody C. Co.	60	10	70	15	.....	15	180	.....	.....	12
Monarch.....	Victor Coal Co.	27	4	31	6	.....	6	252	.....	.....	4
Virginia.....	Virginia M. Co.	40	31	71	3	.....	3	298	.....	.....	8
Coalburg Splint.....	Big Mountain M. Co.	48	17	65	13	.....	13	280	.....	.....	8
B No. 4.....	Kellys Creek M. Co.	45	32	77	8	.....	8	300	.....	.....	17
C No. 2.....	" " " "	55	32	87	8	.....	8	285	.....	.....	13
C No. 3.....	" " " "	8	5	13	1	.....	1	110	.....	.....	2
D No. 4.....	" " " "	15	11	26	3	.....	3	210	.....	.....	5
Cedar Grove.....	Cedar Grove Colliery Co.	35	15	50	10	.....	10	228	.....	.....	6
Riverside.....	Riverside C. Co.	90	60	150	5	.....	5	295	.....	.....	11
No. 2 Gas.....	Cannelton C. Co.	101	22	123	8	36	44	297	297	80	18	
Cannel.....	" " " "	35	10	45	5	.....	5	66	.....	.....	8
No. 1 & 2.....	The Marmet Co.	88	7	95	8	.....	8	200	.....	.....	10
South.....	Winifrede C. Co.	120	.....	120	24	.....	24	250	.....	.....	17
Winifrede Gas.....	" " " "	10	1	11	.....	.....	.....	80	.....	.....	1
North.....	" " " "	11	55	166	23	.....	23	250	.....	.....	37
Ronda.....	Coalburg Colliery Co.	65	13	78	10	.....	10	231	.....	.....	11
Acme.....	Stevens C. Co.	36	24	60	11	.....	11	215	.....	.....	7
Keystone.....	Stevens Coal Co.	75	18	93	11	.....	11	215	.....	.....	8
No. 4.....	Robinson C. Co.	50	9	59	12	.....	12	265	.....	.....	11
Klondike.....	" " " "	20	2	22	2	.....	2	263	.....	.....	4
Chestnut Point.....	East Bank C. & C. Co.	30	10	40	3	2	5	108	108	12	5	
Black Cat.....	Kanawha M. Co.	35	18	53	10	.....	10	120	.....	.....	6
Crown Hill.....	Crown Hill C. Co.	50	18	68	10	.....	10	123	.....	.....	11
Lewiston & Coalb'g	Belmont C. Co.	80	28	108	20	.....	20	220	.....	.....	9
Chesapeake.....	Chesapeake M. Co.	141	48	189	25	.....	25	215	.....	.....	33
Consolidated.....	Montgomery C. Co.	25	9	34	6	.....	6	186	.....	.....	7
Mt. Morris.....	" " " "	23	3	26	9	.....	9	221	.....	.....	7
Rosedale.....	Davis Creek C. Co.	30	3	33	4	.....	4	50	.....	.....	2
Totals.....		1899	556	2455	304	38	342	.....	.....	92	378
MASON COUNTY.												
Camden.....	Camden Clay Co.	12	2	14	1	.....	1	280	.....	.....	2
Beech Grove.....	Beech Grove C. Co.	25	.....	25	5	.....	5	.....	.....	.....	4
Hope.....	Hope Salt & C. Co.	17	5	22	2	.....	2	265	.....	.....	8
Liverpool.....	Mason City M. Co.	25	4	29	4	.....	4	200	.....	.....	4
Hartford.....	Liverpool Salt & C. Co.	18	3	21	2	.....	2	300	.....	.....	2
New Haven.....	Hartford City Salt Co.	16	7	23	5	.....	5	254	.....	.....	7
New Castle.....	Consumers C. M. Co.	55	14	69	20	.....	20	240	.....	.....	7
Totals.....		38	5	43	7	.....	7	160	.....	.....	5
PUTNAM COUNTY												
Plymouth.....	Carver Coal Co.	120	20	140	18	.....	18	246	.....	.....	14
Florence & Pocatallco.....	Marmet-Smith C. & M. Co.	195	14	209	100	.....	100	216	.....	.....	48
Totals.....		315	34	349	118	.....	118	.....	.....	.....	62
FAYETTE COUNTY.												
No. 1 and 2.....	Longacre Colliery Co.	68	34	102	4	30	34	308	310	50	17	
No. 2 and 5.....	W. R. Johnson & Co.	35	7	42	4	.....	4	140	.....	.....	6
Boomer.....	Boomer C. & C. Co.	70	34	104	16	.....	16	.....	.....	.....	12
No. 5.....	Davis-Gordon Co.	30	24	54	9	.....	9	196	.....	.....	10

DETAIL OF MEN EMPLOYED AT THE MINES, 1900.— Continued

NAME OF MINE.	NAME OF COMPANY.	Employees.									
		Inside.			Outside.			No. days mines operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules and horses inside.
		Miners.	Labor-ers.	Total.	Labor-ers.	Coke workers.	Total.				
FAYETTE COUNTY— Continued.											
Eureka.....	Davis-Gordon Co.....	45	22	67	8	.....	8	245	.....	.....	12
Mecca.....	Mecca C. & C. Co.....	100	30	130	25	.....	25	.....	.....	.....	25
Straughan.....	Coal Valley M. Co.....	25	5	30	7	.....	7	200	.....	.....	4
No. 1 Eagle.....	W. R. Johnson.....	14	16	30	6	.....	6	272	.....	.....	3
No. 2 Gas.....	" " ".....	30	14	44	13	30	43	263	250	70	7
No. 5 Block.....	" " ".....	60	20	80	18	.....	18	218	.....	.....	20
No. 2 Gas.....	Carver Brothers.....	92	45	137	10	.....	10	249	.....	.....	9
Edgewater No. 5.....	" " ".....	50	12	62	10	.....	10	239	.....	.....	14
Eagle.....	" " ".....	36	15	51	7	30	37	287	263	54	16
No. 1.....	" " ".....	30	7	37	7	.....	7	243	.....	.....	5
Nos. 1 and 2.....	St. Clair Co.....	80	50	130	12	30	42	200	330	70	18
Diamond.....	J. F. Burdette.....	80	15	95	.....	.....	.....	273	.....	.....	10
Excelsior.....	The Mt. Carbon Co. Ltd.....	22	5	27	4	.....	4	100	.....	.....	3
Vulcan.....	" " ".....	122	27	149	13	70	83	248	312	200	36
No. 1.....	Gt. Kanawha Coll'ry Co. Ltd.....	80	29	109	12	16	28	282	289	66	12
Digby.....	" " " " " " ".....	45	18	63	6	.....	6	214	.....	.....	9
No. 5.....	" " " " " " ".....	10	6	16	4	.....	4	182	.....	.....	2
Eagle.....	" " " " " " ".....	.....	4	4	.....	.....	.....	.....	.....	.....	.....
Gauley Mt.....	Gauley Mountain C. Co.....	225	99	324	57	44	101	306	365	95	47
Gaymont.....	D. S. Cook & Son C. & C. Co.....	50	9	59	5	10	15	225	260	25	8
Sunnyside.....	Victoria C. & C. Co.....	28	10	38	5	7	12	110	130	18	9
Elmo.....	New River M. Co.....	44	9	53	5	.....	5	100	.....	.....	4
Michigan.....	Michigan C. Co.....	25	6	31	8	.....	8	156	.....	.....	5
Fayette.....	Low Moor Iron Co.....	48	10	58	5	4	9	222	262	12	7
Nuttall.....	Nuttallburg C. & C. Co.....	55	32	87	16	22	38	210	268	39	23
Newlyn.....	Newlyn C. & C. Co.....	10	1	11	2	.....	2	30	.....	.....	1
Keeneys Creek.....	Nuttallburg C. & C. Co.....	35	11	46	6	.....	6	210	.....	.....	12
Brown.....	Brown Coal Co.....	60	14	74	6	.....	6	216	.....	.....	9
Boone.....	Boone C. & C. Co.....	60	12	72	6	.....	6	200	.....	.....	8
Ballenger No. 1.....	Ballenger C. Co.....	62	14	76	6	.....	6	263	.....	.....	8
Ballenger No. 2.....	" " ".....	21	6	27	3	.....	3	261	.....	.....	3
Blume.....	Blume C. & C. Co.....	70	8	78	6	.....	6	260	.....	.....	9
Smokeless.....	Smokeless C. Co.....	50	12	62	6	.....	6	169	.....	.....	7
Dubree.....	Rothwell C. Co.....	50	10	60	6	.....	6	210	.....	.....	6
North Side.....	Victoria C. & C. Co.....	60	10	70	9	45	54	200	277	133	10
South Side.....	" " ".....	100	15	115	.....	10	10	.....	.....	.....	.....
Caperton.....	Caperton C. & C. Co.....	15	6	21	2	5	7	250	60	18	4
Cliff Top.....	Longdale Iron Co.....	110	140	250	10	80	90	313	365	193	16
Cunard.....	Cunard Coal Co.....	32	15	47	7	.....	7	175	.....	.....	.....
Brooklyn.....	Brooklyn C. Co.....	39	33	72	9	28	37	213	180	65	10
Fire Creek.....	Fire Creek C. & C. Co.....	75	15	90	10	22	32	215	269	94	11
Central.....	Central Coal Co.....	40	12	52	10	8	18	260	244	47	8
Echo Nos. 1 and 2.....	Echo C. & C. Co.....	90	35	125	10	14	24	250	311	40	10
Red Ash.....	Red Ash C. Co.....	63	42	105	10	28	38	209	265	60	14
Rush Run.....	Rush Run C. & C. Co.....	57	63	120	11	75	86	215	107	92	12
Thurmond.....	The Thurmond C. Co.....	100	15	115	10	.....	10	257	.....	.....	10
Stone Cliff.....	Beury C. & C. Co.....	57	18	75	3	9	12	248	301	60	14
Dimmock.....	Big Bend C. Co.....	50	10	60	7	.....	7	140	.....	.....	.....
Keystone & Beech-wood.....	Beechwood C. & C. Co.....	150	15	165	10	8	18	215	300	30	8
Alaska.....	Alaska C. & C. Co.....	90	15	105	10	2	12	210	300	16	9
Slater.....	Slater C. Co.....	22	6	28	.....	.....	.....	150	.....	.....	5
Harvey.....	Harvey C. & C. Co.....	200	35	235	10	25	35	180	200	100	20
Red Star.....	Starr C. & C. Co.....	100	23	123	12	.....	12	219	.....	.....	18
Collins.....	Collins Colliery Co.....	225	100	325	15	55	70	270	300	98	30
Sun.....	Sun C. & C. Co.....	125	25	150	25	.....	25	240	.....	.....	30
Berryhale.....	McKell C. & C. Co.....	8	2	10	4	.....	4	50	.....	.....	2
Dunnloop No. 1 & 2.....	Dunnloop C. & C. Co.....	136	10	146	45	.....	45	245	.....	.....	36
Turkey Knob.....	Turkey Knob C. Co.....	90	35	125	10	.....	10	.....	.....	.....	.....
Macdonald.....	Macdonald Colliery Co.....	120	32	152	100	29	129	280	146	40	30
Sugar Creek.....	Sugar Creek C. & C. Co.....	90	25	115	20	.....	20	270	.....	.....	19

DETAIL OF MEN EMPLOYED AT THE MINES, 1900.— Continued.

		Employees.									
NAME OF MINE.	NAME OF COMPANY.	Inside.			Outside.			No. days mine operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules and horses inside.
		Miners.	Laborers.	Total.	Laborers.	Coke Workers.	Total.				
FAYETTE COUNTY— <i>Continued.</i>											
Bragg Hill Shaft.....	White Oak Colliery Co.....	30	.....	30	.....	.....	.....	.....	.....	.....	.....
Big Q. No. 3.....	Quinnimont C. Co.....	90	22	112	20	26	46	240	275	90	18
Robins.....	Robins C. Co.....	35	6	41	4	.....	4	.....	.....	.....	10
Laurel Creek.....	Laurel Creek C. Co.....	75	12	87	3	.....	3	240	.....	.....	10
Greenwood.....	Greenwood C. Co.....	250	25	275	15	.....	15	259	.....	.....	25
Gaston.....	Carbon C. & C. Co.....	20	27	47	5	10	15	79	30	12	2
Raven No. 2.....	Raven C. & C. Co.....	30	8	38	8	.....	8	30	.....	.....	3
No. 2, A B & C Centr's	W. P. Rend.....	25	22	47	.....	.....	.....	.....	.....	.....	.....
Totals.....		4816	1576	6392	767	772	1539	.....	1889	790	.....
RALEIGH COUNTY.											
Royal.....	Royal C. & C. Co.....	85	24	109	19	17	36	213	168	78	19
No. 1, 2, 3.....	Raleigh C. & C. Co.....	4	9	13	4	.....	4	120	.....	.....	.....
Wright.....	Wright C. & C. Co.....	10	1	11	15	.....	15	35	.....	.....	.....
Totals.....		99	34	133	38	17	55	.....	78	19	.....
MINGO COUNTY.											
Camp Branch.....	Camp Branch C. & C. Co.....	50	7	57	4	.....	4	200	.....	.....	7
Olympia.....	Olympia C. & C. Co.....	8	2	10	4	.....	4	215	.....	.....	2
Freeport.....	Van Kirk C. & M. Co.....	30	2	32	3	.....	3	250	.....	.....	2
Maritime.....	Logan Cons. C. Co.....	40	26	66	10	.....	10	121	.....	.....	7
Red Jacket.....	Red Jacket C. Co.....	23	12	35	5	.....	5	147	.....	.....	3
Logan.....	Logan Cons. C. Co.....	110	40	150	15	.....	15	292	.....	.....	15
Lynn.....	Lynn C. & C. Co.....	25	.....	25	10	.....	10	260	.....	.....	7
	Mingo C. M. Co.....	45	11	56	3	.....	3	200	.....	.....	6
Thacker.....	Thacker C. & C. Co.....	100	40	140	12	.....	12	280	.....	.....	13
Grapevine.....	Grapevine C. Co.....	30	5	35	5	.....	5	259	.....	.....	4
Lick Fork.....	Lick Fork C. Co.....	50	7	57	5	.....	5	288	.....	.....	8
Pearl.....	Pearl C. Co.....	8	6	14	4	.....	4	120	.....	.....	3
Totals.....		519	158	677	74	.....	74	.....	.....	.....	77
McDOWELL CO.											
Tidewater.....	Tidewater C. & C. Co.....	51	23	74	9	30	39	310	310	55	11
Bottom Creek.....	Bottom Creek C. & C. Co.....	42	18	60	12	24	36	240	240	68	11
Peerless.....	Peerless C. & C. Co.....	64	105	169	12	41	53	255	300	74	12
Empire.....	Empire C. & C. Co.....	40	25	65	10	40	50	248	248	95	8
Shawnee.....	Shawnee C. & C. Co.....	60	20	80	15	35	50	200	200	80	.....
Eureka.....	Eureka C. & C. Co.....	90	45	135	11	65	76	262	365	85	.....
Pulaski.....	Pulaski Iron Co.....	135	77	212	25	80	105	200	365	170	16
Keystone.....	Keystone C. & C. Co.....	60	20	80	10	20	30	270	300	50	12
Algoma.....	Algoma C. & C. Co.....	119	57	176	25	85	110	307	307	172	27
Gilliam.....	Gilliam C. & C. Co.....	60	20	80	25	45	70	240	240	80	10
Rolfe.....	Rolfe C. & C. Co.....	75	25	100	10	50	60	222	260	70	20
Roanoke.....	Roanoke C. & C. Co.....	60	30	90	10	50	60	301	365	80	14
Indian Ridge.....	Indian Ridge C. & C. Co.....	50	20	70	8	35	43	.....	.....	80	11
Arlington.....	Arlington C. & C. Co.....	60	30	90	10	40	50	298	298	70	13
Greenbrier.....	Greenbrier C. & C. Co.....	75	25	100	15	30	45	258	300	80	18
McDowell.....	McDowell C. & C. Co.....	53	24	77	8	.....	8	295	365	96	10
Ashland.....	Ashland C. & C. Co.....	75	35	110	15	40	55	300	300	90	14
Elk Ridge.....	Elk Ridge C. & C. Co.....	85	20	105	10	40	50	220	300	95	10
Lynchburg.....	Lynchburg C. & C. Co.....	100	27	127	25	57	82	250	250	100	16
Powhatan.....	Powhatan C. & C. Co.....	90	32	122	8	80	88	230	311	135	.....
No 1 and 2.....	Upland C. & C. Co.....	115	43	158	15	127	142	277	365	.....	12
Houston.....	Houston C. & C. Co.....	105	23	128	12	91	103	300	300	130	18
No. 1 and 2.....	Crozer C. & C. Co.....	198	113	311	22	176	198	313	313	275	25
Turkey Gap.....	Turkey Gap C. & C. Co.....	150	50	200	50	150	200	300	300	200	20

DETAIL OF MEN EMPLOYED AT THE MINE, 1900.—
Continued.

NAME OF MINE.	NAME OF COMPANY.	Employees.										
		Inside.			Outside.			No. days mine operated.	No. days ovens operated.	Avg. No. ovens operated.	No. mules and horses inside.	
		Miners.	Laborers.	Total.	Laborers.	Coke Workers.	Total.					
McDOWELL COUNTY.—Continued.												
Norfolk.....	Norfolk C. & C. Co.....	88	27	115	25	45	70	300	300	120	8	
Lick Branch.....	Norfolk C. & C. Co.....	75	15	90	10	45	55	300	300	116	7	
Angle.....	.....	46	11	57	7	20	27	300	300	60	8
Shamokin.....	Shamokin C. & C. Co.....	80	30	110	10	45	55	275	365	110	12	
Elkhorn.....	Elkhorn C. & C. Co.....	110	40	150	15	45	60	215	212	140	17	
	Big Four C. & C. Co.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Totals.....	2411	1030	3441	439	1631	2070	.....	.....	2976	390
MERCER COUNTY.												
Sterling.....	Mill Creek C. & C. Co.....	75	70	145	12	70	82	305	300	130	12	
Coaldale.....	Coaldale C. & C. Co.....	90	105	195	12	56	62	305	190	88	14	
Buckeye.....	Buckeye C. & C. Co.....	60	20	80	10	35	45	311	311	75	12	
Caswell.....	Caswell Creek C. & C. Co.....	200	60	260	35	75	110	311	311	150	20	
Booth-Bowen.....	Booth-Bowen C. & C. Co.....	145	26	171	27	44	71	311	311	90	27	
Louisville.....	Louisville C. & C. Co.....	60	22	82	8	40	48	225	300	75	15	
Goodwill.....	Goodwill C. & C. Co.....	40	25	65	15	20	35	280	340	46	14	
2nd East.....	S.-W. Va. Imp. Co.....	6	4	10	1	.....	1	60	.....	.....	2
	Totals.....	676	332	1008	120	334	454	.....	.....	654	116

CHAPTER X.

MINE LOCOMOTIVES.

In thirteen Counties, at seventy-two mines, there are used 69 steam, 43 electric and 4 compressed air mine locomotives, which are used for hauling the mine cars in and about the mines.


McDowell County leads with 29 steam, 7 electric and 2 air locomotives. Fayette is second with 15 steam, 10 electric and 2 air locomotives.

The tables following give the number of each kind used in the State.

Summary of the number of mine locomotives in use in the State, 1900.

COUNTIES.	Locomotives.			Number of mines using locomotives.	Mining district in which located.
	Steam.	Electric.	Compressed air.		
Barbour.....		2		2	First.
Hancock.....	1			1	First.
Marion.....		6		1	First.
Marshall.....		1		1	First.
Taylor.....		2		1	First.
Tucker.....	3	7		5	First.
Kanawha.....	5	4		6	Second.
Mason.....	1			1	Second.
Putnam.....	2	1		2	Second.
Fayette.....	15	10	2	18	Third.
Mingo.....		2		2	Fourth.
McDowell.....	29	7	2	25	Fourth.
Mercer.....	13	1		7	Fourth.
Totals.....	69	43	4	72	

Locomotives used in the mines, kind and make, 1900.

COUNTY.	NAME OF FIRM.	Steam.	Electric.	Air.
Barbour.....	Philippi C. M. Co.....		1	
"	Southern C. & Trans. Co.....		1	
	Totals.....		2	
Hancock.....	Marquett C. Co.....	1		
	Totals.....	1		
Marion.....	Monongah Co.		6	
	Totals.....		6	
Marshall.....	Glendale C. Co.....		1	
	Totals.....		1	
Taylor.	Flemington C. & C. Co		2	
	Totals.....		2	
Tucker.....	Cumberland C. Co	3		
"	Davis C. & C. Co. (Thomas Drift).....		3	
"	Davis C. & C. Co. (Thomas Shaft).....		1	
"	W. Va. C. & P. Ry. (Coketon No. 1).....		1	
"	W. Va. C. & P. Ry. (Coketon No. 3).....		2	
	Totals.....	3	7	
Kanawha.....	Campbells Cr. Co. (New Mine)		1	
"	New Diamond C. Co	2		
"	Cannelton C. Co.....	2		
 "	Stevens C. Co. (Aeme).....		1	
"	Stevens C. Co. (Keystone)		1	
"	Chesapeake M. Co	1	1	
	Totals.....	5	4	
Mason..	Consumers C. M. Co. (New Haven).....	1		
	Totals.....	1		
Putnam.....	Carver C. Co	1		
"	Marmet-Smith C. & M. Co.....	1	1	
	Totals.....	2	1	
Fayette	Boomer C. & C. Co.....		1	
"	W. R. Johnson (No. 5 Block)	1		
"	Carver Bros. (No. 2 Gas).		1	
"	St. Clair Co.....		1	
"	The Mt. Carbon Co. Ltd. (Vulcan).....			1

Locomotives used in the mines, kind and make, 1900.—Continued.

COUNTY.	NAME OF FIRM.	Steam.	Electric.	Air.
Fayette	Gt. Kan. Coll. Co. Ltd. (No. 1). ....	.....	2	.....
"	Gauley Mountain C. Co.	4	.....	.....
"	Victoria C. & C. Co. (North S.).....	1	.....	.....
"	" " " " (South S.).....	2	.....	.....
"	Fire Creek C. & C. Co.	1	.....	.....
"	Red Ash C. Co. ....	.....	1	.....
"	Rush Run C. & C. Co. ....	.....	1	.....
"	The Thurmond C. Co. ....	.....	3	.....
"	Alaska C. & C. Co.	1	.....	.....
"	Harvey C. & C. Co.	1	.....	.....
"	Star C. & C. Co.	1	.....	.....
"	Greenwood C. Co.	2	.....	.....
"	W. P. Rend.	1	.....	1
	Totals.	15	10	2
Mingo	Logan Cons. C. Co. (Maritime) .....	.....	1	.....
"	" " " " (Logan) .....	.....	1	.....
	Totals. ....	.....	2	.....
McDowell.....	Tidewater C. & C. Co.	1	.....	.....
"	Bottom Creek C. & C. Co.	1	.....	.....
"	Peerless C. & C. Co.	1	.....	2
"	Empire C. & C. Co.	1	.....	.....
"	Shawnee C. & C. Co.	1	.....	.....
"	Eureka C. & C. Co.	1	.....	.....
"	Pulaski Iron Co. ....	.....	1	.....
"	Keystone C. & C. Co.	2	.....	.....
"	Algoma C. & C. Co.	1	.....	.....
"	Gilliam C. & C. Co.	1	.....	.....
"	Indian Ridge C. & C. Co. ....	.....	1	.....
"	McDowell C. & C. Co.	1	.....	.....
"	Ashland C. C. Co.	2	.....	.....
"	Elk Ridge C. & C. Co.	1	.....	.....
"	Lynchburg C. & C. Co.	2	.....	.....
"	Powhatan C. & C. Co.	2	.....	.....
"	Upland C. & C. Co.	1	1	.....
"	Houston C. & C. Co.	1	.....	.....
"	Crozer C. & C. Co.	1	3	.....
"	Turkey Gap C. & C. Co.	2	.....	.....
"	Norfolk C. & C. Co. (Norfolk).....	.....	1	.....
"	" " " " (Lick Branch)	1	.....	.....
"	Shamokin C. & C. Co.	2	.....	.....
"	Elkhorn C. & C. Co.	2	.....	.....
"	Big Four C. & C. Co.	1	.....	.....
	Totals.	29	7	2

Locomotives used in the mines, kind and make, 1900.—Continued.

COUNTY.	NAME OF FIRM.	Steam.	Electric.	Air.
Mercer.....	Mill Creek C. & C. Co.....	2		
".....	Coaldale C. & C. Co.....		1	
".....	Buckeye C. & C. Co.....	2		
".....	Caswell Creek C. & C. Co.....	4		
".....	Booth-Bowen C. & C. Co.....	3		
".....	Goodwill C. & C. Co.....	1		
".....	S - W. Va. Imp. Co.....	1		
	Totals.....	13	1	

Steam Boilers at Coal Mines and Acres of Coal Worked out, 1899-1900.

COUNTY.	No. mines having boilers.	No. insured.	No. not insured.	Total No. of boilers.	Acres of coal worked out.
Barbour.....	4	2	7	9	10.57
Brooke.....					11.40
Hancock.....	1		1	1	8.61
Harrison.....	10	10	3	13	69.70
Marion.....	13	48	4	52	323.24
Marshall.....	2	2	3	5	35.78
Mineral.....	3		4	4	64.00
Monongalia.....	1	1		1	9.58
Ohio.....	3	1	3	4	18.93
Preston.....	4	2	6	8	49.87
Taylor.....	1	3		3	41.87
Tucker.....	4	15		15	139.93
Randolph.....					12.20
Kanawha.....	19	16	13	29	274.21
Mason.....	3		6	6	21.58
Putnam.....	2		6	6	29.31
Fayette.....	44	70	25	95	859.31
Raleigh.....	2	2	6	8	14.23
Mingo.....	4		7	7	75.57
McDowell.....	29	62	24	86	457.25
Mercer.....	7	4	19	23	111.64
Totals.....	156	238	137	375	2638.78

CHAPTER XI.

EXPLOSIONS OF GAS AND POWDER.

During the year there were five fatal gas explosions in which 50 lives were lost, 46 being lost in one single explosion at the Red Ash mine. Four distinct powder explosions killed 6 men, three of which were killed in one explosion in the Highland mine, in Marion county.

There were three powder explosions in which 3 men were nonfatally injured, four gas explosions injuring 8 men and one dust explosion injuring one man.

Briefly the explosions were as follows:

- 4 Powder explosions killing 6 men.
- 5 Gas explosions killing 50 men.
- 3 Powder explosions injuring 3 men.
- 4 Gas explosions injuring 8 men.
- 1 Dust explosion injuring 1 man.

See special report upon the Red Ash mine disaster, Chapter XII.

The following list of mines are reported as producers of explosive gas:

MARION COUNTY.

West Fairmont shaft, Gaston, Worthington Slope, Monongah No. 6 and Farmington Shaft.

MARSHALL COUNTY.

Boggs Run, Glendale Shaft and Moundsville Shaft.

PRESTON COUNTY.

Newburg Shaft.

FAYETTE COUNTY.

Red Star, Sun, Rush Run, and Red Ash.

McDOWELL COUNTY.

Tidewater, Empire, Keystone and Bottom Creek.

OHIO COUNTY.

Elm Grove Shaft.

EXPLOSIONS.

Fatal 1899-1900.

County.	Name of mine.	Name of Company.	Name of Person.	Date.	Kind of Explosion.
Barbour.....	Berryb'rg No.1	So. C. & Tran. Co....	J. M. Barnes.....	Apr. 27, 1900.	Powder exp.
Marion.....	Highland.....	Highland C. & C.Co.	E. Bowers.....	Sept. 5, 1899.	Powder "
"	Highland.....	Highland C. & C.Co.	R. C. Hardesty...	Sept. 5, 1899.	Powder "
"	Highland.....	Highland C. & C. Co.	Fred Hamilton...	Sept. 5, 1899.	Powder "
"	Gaston.....	Gaston Gas C. Co....	Chas. M. Yates...	Sept. 10, 1899.	Gas "
Ohio.....	Elm Grove.....	Elm Grove C. Co....	Frank Martin....	Oct. 9, 1899.	Gas "
Fayette.....	Red Star.....	Star C. & C. Co.....	Mat Thomas.....	Aug. 21, 1899.	Gas "
"	Stone Cliff.....	Beury C. & C. Co....	O. C. Kubach.....	Dec. 31, 1899.	Boiler "
"	Red Ash.....	Red Ash Coal Co....	46 persons See special report.	Mar. 6, 1900.	Gas "
"	Edgew't'r No.2	Carver Brothers.....	Charles Johnson	May 18, 1900.	Powder "
McDowell...	Bottom Creek..	Bottom C'k C.&C.Co.	Ludwig Sawkac..	Feb. 19, 1900.	Gas "
"	Indian Ridge..	Ind'n R'dge C.&C.Co.	Thomas Powell..	May 4, 1900.	Powder "

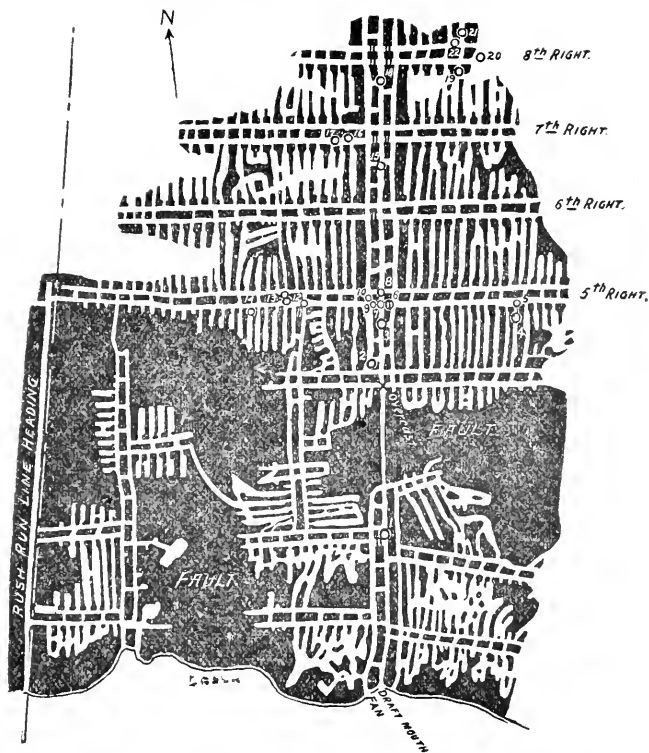
EXPLOSIONS.

Non-fatal-1899-1900.

Preston.....	Newburg.....	Newburg C. & C. Co.	Thos. Ritson.....	May 17, 1900.	Gas "
Fayette.....	Star.....	Star C. & C. Co.....	Lewis Burks.....	Aug. 21, 1899.	Gas "
"	Star.....	Star C. & C. Co.....	Isaac Burks.....	Aug. 21, "	Gas "
"	Arbuckle.....	W. P. Rend.....	J. E. Rippetoe...	Feb. 23, 1900.	Powder "
"	Red Ash.....	Red Ash C. Co.....	Wm. Robinson...	Mar. 6, "	Gas "
"	"	"	Ebenezer Jones...	Mar. 6, "	Gas "
"	"	"	Joseph Elliott...	Mar. 6, "	Gas "
"	Edgew't'r No.2	Carver Brothers.....	Owen Edwards...	May 16, "	Dust "
"	Sun.....	Sun C. & C. Co.....	Henry Morris...	May 21, "	Gas "
"	"	"	Doc. Goff.....	May 21, "	Gas "
McDowell...	Indian Ridge..	Ind'n R'dge C.&C.Co.	Isaac Hill.....	May 4, "	Powder "
Mercer.....	Coaldale.....	Coaldale C. & C. Co.	D. J. Harrington..	Aug. 24 1899.	Powder "

CHAPTER XII.

MAP OF RED ASH MINE.



Through the courtesy of "Mines and Minerals" the above cut is reproduced.

Number of bodies found at the points designated by the numerals and circles on the map.

At No. 1 were found 5 bodies.

At No. 2 was found 1 body.

At No. 3 were found 3 bodies.

At No. 4 was found 1 body.
 At No. 5 was found 1 body.
 At No. 6 were found 2 bodies.
 At No. 7 was found 1 body.
 At No. 8 was found 1 body.
 At No. 9 were found 2 bodies.
 At No. 10 was found 1 body.
 At No. 11 }
 12 { were found 10 bodies.
 13 }
 14 }
 At No. 15 were found 8 bodies.
 At No. 16 was found 1 body.
 At No. 17 was found 1 body.
 At No. 18 were found 4 bodies.
 At No. 19 was found 1 body.
 At No. 20 was found 1 body, B. B. Long, fire boss.
 At No. 21 was found 1 body.
 At No. 22 was found 1 body.

THE RED ASH MINE EXPLOSION.

Memorandum of James W. Paul at Inquest on Red Ash Mine disaster held in a school house at Rush Run March 13 and 14, 1900, by Dr. Lawrence Montgomery, Coroner for Fayette County, West Virginia.

State representatives present: Charles Dillon, Prosecuting attorney for Fayette county, James W. Paul, Chief Mine Inspector, Edward Pinkney, Mine Inspector for third district, Jerry Meade, Mine Inspector for second district; for the Red Ash Coal Co. J. W. St. Clair.

Coroner for Fayette County, L. C. Montgomery.

The following Jurors were summoned:

Isaac Dodd.

B. F. Bailey.

C. G. Brown.

J. A. Collins.

Lee Trummel.

B. E. Bare.

Mr. Barker.

B. F. Bailey, absent, being sick, R. J. Thrift was summoned after Mr. Barker was rejected for reason of his being an employe of the Rush Run Coal & Coke Co.

Jury sworn at 11:50 A. M., March 13th.

Mr. Charles Dillon read to the jury the law pertaining to inquests and explained the purport of the inquest about to be conducted.

General St. Clair disclaimed the right to hold the inquest under the mining statute, but consented to allow the inquest to proceed under that statute.

J. W. Paul outlined the object of the investigation and requested that the jury attempt to arrive at the cause of the disaster from the testimony given.

Witnesses as called.

Edward Pinkney, Mine Inspector:

Says explosion was due to gas, supplemented by dust.

Seat of explosion on 8th Left.

Gas found on inspection on 7th and 8th Left.

Dr. B. R. Smith. Physician for Red Ash Coal Co.:

Black Long died from suffocation and had no fractures.

Examined 44 persons dead. There are 3 injured yet alive.

Charles Perfader not as yet taken out. Sore on right leg.

None burned sufficiently to cause death.

F. Howald, General Manager, Red Ash Coal Co.:

Read letter of instruction to Fire bosses. Long had experience gained at Red Ash.

John Laing, Superintendent of Red Ash Coal Co.:

Did not know who had charge of the safety lamps. On morning of 6th, do not know when Long went into mine. Fan is supposed to run 17 hours per day. Do not know who had charge of the fan at night since the holidays. Black Long was in charge of the safty lamp. The lamp was the property of the Red Ash Mine.

Richard Thompson, Fire Boss, at Red Ash:

Working here since Oct. 3, 1899. First time as fire boss.

Worked in fiery mines in Pennsylvania and Colorado.

No particular time set for going into the mine. Have gone in the mine before fan started. Have written on board "Keep out of mine until fan was started."

Went in 5:30 to 6 o'clock. Miners entered as early as 6:50.

Had two safety lamps belonging to the company.

All beyond the 8th Right and Left gas was given off.

Duties to look after the gas and ventilation. My duties to start the fan since holidays.

Compressor usually started at 5:30 A. M.

Reported at the parting at the 7th Left.
Attribute explosion to gas, followed by dust.
Originated inside of 8th Right on Main Heading.

John Laing, recalled:

Some of the men had reached their working places. One-half out of 29 had gotten to their working places.
The men on the 8th Right followed Long in before Long returned.
I have examined the 8th Left and found no bodies there.

Thos. Boyd:

In company with Mr. Nesbitt I found Black Long.

J. I. Absalom, Former Mine Inspector:

Explosion occurred on main entrance. No dust explosion in connection with the gas. Approved plan of operation.

Mr. Geo. Bryant, miner at Red Ash:

Worked in the mine on Monday night until 12 o'clock on 7th Left heading. The air was not sufficient to operate the cutter machine.

When I came out I opened the door on the 7th Left. It drug on the rails and was hard to open. I gave it a kick but did not look back to see if it had closed. When a driver in the mine I had occasion to pass through a door and this door was kept open one-third of the time. I once ran through the door and broke it and it was several days before it was repaired. A trapper boy was employed to attend this door.

I do not understand the systems of ventilating a mine.

March 14th, 1900. 9:50 A. M.

John Long, Mine Boss:

My duty is general supervision of inside of mine. The Supt. employed the fire boss.

Men started the mine and trips at 6:30 A. M. Fan to start anywhere from 5:30 to 6:30 A. M.

Considered Black Long competent.

I have had very little experience in gas mines.

The fire boss was the man to start the fan.

The Drum runner and fire boss usually started it since the holidays.

Arrived at mine at 7 A. M. on morning of 6th.

Explosion occurred a few minutes after 7.

Went up the incline on a trip with some miners, drivers and day men.

Miners had instructions to wait at inside partings until the fire boss reported.

Instructed men to not wait on the outside when fan was running.

Do not know how much air the law requires and do not know how much air a man requires in a mine.

Have not read the mine law.

Usually 70 men and 10 mules are employed in the mine.

Geo. Thurbom, Drum runner:

Explosion by my watch occurred at 7:16 A. M.

Was at top of hill at 6:30 A. M.

Safety lamp usually kept in the "Cab." Every two or three days the lamp was taken out of the mine and cleaned.

Long never marked on the board on outside.

The regular fire boss did mark on the board.

Completed at 11 A. M.

Jury reported at 11:25 that they could not agree as to the extent of report. The oath was then re-read to them. Retired at 11:35. Returned with signed verdict at 11:55 A. M.

VERDICT.

We the Jury find that B. B. Long and others came to their death by reason of an explosion of gas in the Red Ash Coal mine in the County of Fayette and State of West Virginia on the 6th day of March, 1900, caused by the lack of proper ventilation on that date.

Signed,

R. J. Thrift,
Isaac Dodd,
J. A. Collins,
C. G. Brown,
B. E. Bare,
Lee Trimble.

Jurors.

Following is an editorial from the columns of the Engineering and Mining Journal, New York, under date of June 9th, 1900:

"The Red Ash Mine accident, which occurred in West Virginia in March last, and in which 46 persons were killed, is clearly explained in the report of State Mine Inspector J. W.

Paul, which is given on another page. From his statement it appears plainly that it comes under the head of those accidents which are the cumulative result of several apparently slight acts of negligence. The mine was fairly well ventilated, and so far as the company operating it is concerned the only serious fault in its equipment was the absence of any provision for wetting the gangways to lay the dust. The disaster was not a dust explosion, it is true, but one of gas, but there is little doubt from Mr. Paul's report that the dust aided materially in spreading the explosion and adding to its force. There would have been an explosion had the mine been wet, but probably it would have been much less disastrous in its results.

The various incidents which preceded the accident show a loose state of discipline and a disregard of the mine regulations which is not very creditable. The rules forbade the miners to enter the headings until the fire-boss had completed his rounds; but on this occasion they decided not to wait, although the fire-boss was known to be in the mine. The ventilating fan was of sufficient capacity, but there was general uncertainty as to whose business it might be to see that it was started up at the proper time. A miner on leaving work the previous evening had left open an air door, which it was his duty to close. Possibly there were some other acts of commission or omission which will never be known. Now it is not probable that all this carelessness and disregard of precaution had occurred on the day of the explosion for the first time. The fact that that they did occur and that in conjunction they caused a disastrous explosion, is pretty strong evidence that such things were common in the mine, although they had never before occurred under just the right conditions to make trouble. They go to prove that there was a general disregard of the rules and an absence of the close watch of details which is always required in a fiery mine. Perhaps the wonder is not that the explosion occurred, but rather that it did not occur sooner.

Mr. Paul calls attention to the insufficiency of the present mining law of the State, which was passed at a time when few or none of the mines could be called fiery, to provide for conditions which have arisen as mining operations have been extended. His suggestions are practical and useful, and it is to be hoped that the Legislature will heed them. We must still adhere to the opinion which we have often expressed, that the most effectual protective law would be one strictly enforcing the liability of the mine-owners and operators to damages in all cases of death or injury, their only defense to be found in direct and positive proof of contributory negligence on the part of the sufferer for whom such damages may be claimed.

A point to which attention is called in the report, and of which we do not remember any previous mention, is that the

use of machines in mining is accompanied by a marked increase in the quantity of dust to be found in a mine. This can, of course, be met by proper arrangements for sprinkling or wetting; but it is a point which should be borne in mind."

THE RED ASH MINE DISASTER.

(By James W. Paul, Chief Mine Inspector.)

The Red Ash mine in West Virginia is operated by the Red Ash Coal Company. The mine is located on the line of the Chesapeake and Ohio Railroad on the South side of New River in Fayette County and is a drift mine about 450 feet above the river, being reached by an incline 1350 feet long. The mine has a covering (coping) about 500 feet thick.

The bed of coal is known as the Red Ash or Fire Creek, and is at present being mined at Rush Run, Dimmock, Echo, Fire Creek, Beechwood Alaska, Red Ash and other mines. The coal has a thickness varying from 3 feet to 6 feet. The coal in the Red Ash mine averages 5 ft. 6 in. in thickness and is practically free from partings.

This Red Ash mine was opened in 1892 about one and one-half miles from the Rush Run mine and adjacent to the latter mine lease.

This Red Ash coal is faulty in places and is often cut out by rolls (washes) and is frequented in some sections by clay and shale penetrating the deposit. Such irregularities have been encountered in most of the mines working this coal deposit, and the Red Ash mine has been no exception. For a distance of 500 feet the main heading was driven through solid shale and sandstone.

The coal from this mine is used for steam generation and for the manufacture of coke.

The proximate chemical analysis of the coal is as follows:

Moisture... ..	.76	per cent.
Volatile matter.	22.60	
Fixed Carbon.	75.46	
Ash.....	.71	
Sulphur . . . . .	.47	
	<hr/>	
	100.00	

The roof of the mine is a stronger shale and in some places a micaceous sandstone. Practically no timber is required on the

main and lateral headings. The roof remains well intact without the aid of props, even at the passways where the headings are sufficiently wide to accommodate two tracks each of 44 inch gauge. In the rooms props are judiciously used where there is the slightest pretext of danger.

The general safety of this mine may be judged of by the accident list prior to the recent disaster. Since 1892 three men have been killed by falls of slate and coal and eight have been injured by falls of slate and coal, a record commendable for a mine of its development. The question arises "Were the conditions in this mine such as to arouse apprehension of a casualty due to the presence of explosive gas." The history of this mine will best answer this question.

The ventilation of this mine up to the late spring of 1898 was produced by means of a furnace located near the crop line on the first right heading. The conditions not being favorable for furnace ventilation the furnace was abandoned and a fan installed on the left return aircourse during the spring of 1898. The fan had a working capacity of 25,000 cu. ft. of air per minute and the record of inspections show that it actually caused 23,790 cu. ft. of air to pass through the mine.

As early as 1897 this mine was known to generate, in the advance workings, gas of an inflammable nature, in small volumes. In the advance workings of the adjoining Rush Run mine gas was given off, and through a miner entering an abandoned heading in this mine, after being warned not to enter, his open light exploded the gas and he lost his life. This had the effect of causing extreme caution to be observed in the Red Ash Mine. A fire boss was employed as is required by the mining statutes and a letter of instruction was issued by the Red Ash Coal Company outlining in detail the method to be followed in the examination of the mine, and in this letter the fire boss was instructed to comply with the State mining laws in every particular.

Gas was known to be generated at the face of all headings beyond the 8th right heading, and it was generally known in the mining community that the Red Ash mine was a gaseous mine in the most advanced workings. The miners are fully aware of the existence of the gas and it was the custom of the miners to wait at the parting on the main heading between the sixth and seventh right headings until the Fire boss had made his inspection and reported to the men its condition before they advanced beyond this point.

On the morning of March 6th, 1900, the men did not wait at the accustomed place until the fire boss had made the examination of the mine, but proceeded on their journey to their respective working places. Only a few workmen, trapper boys

and mule drivers had reached their places when at 7:16 A. M. the explosion occurred. The fire boss had entered the mine at not earlier than 6:35 o'clock and as he had a long journey to make and had over forty different places to examine it is quite probable that he had made no more than one examination, since he was found at the place near the face of the 8th right heading where it was customary to make the first test. It appears that gas was found there by the fire boss, for he had opened a valve on the compressed air line near the face of the heading, this with a probable view of diluting and driving out the gas.

This explosion was not due to a lack of proper legislation. In fact it was due to a positive violation of the mining law. Section 10, chapter 50 of the Acts of 1887 says in part, "and no workman shall enter or be permitted to enter, any mine or part of a mine, generating fire damp, until it has been examined by the fire boss and reported by him to be safe."

Had the workmen remained at their accustomed places until the fire boss had made the examination of the mine the explosion would not have occurred, unless some accident had happened the lamp of the fire boss.

The greatest force of the explosion was on the 8th left heading. The direction of the force was towards the mouth of the main heading and towards the face of the cross headings.

The greatest destruction having been on the 8th left heading does not necessarily prove that the explosion originated there. No bodies were found on the 8th left heading or air course or rooms on either of said 8th left entries.

It is probable that the open lights carried by the men found on the 7th left heading were responsible for the ignition of the gas. In other sections of the mine there may have been small volumes of gas which under normal conditions would not have exploded, but the explosion on the 7th and 8th left would have the effect of creating a rush of air and a compression of the air throughout the mine. This compression occurring in the presence of a small percentage of gas and dust would instantly be ignited by any open light that might be present, thus extending the explosion to other sections where a similar favorable condition would be made for an explosion. This would follow in such rapid succession as to appear at the drift mouth that one general explosion had occurred. This is in line with the close observations made by Mr. Pinkney and noted in his report.

The probable cause of there being an accumulation of gas sufficient to cause an explosion is explained by the evidence secured at the coroner's inquest. A machine runner being the last to leave the mine at midnight on the 5th of March stated that he opened the door on the 7th left heading and after com-

ing through the door gave it a kick and did not look to see if it closed. When opening the door he claimed it met with some obstruction and that he had to push hard to overcome it. It is very reasonable to conclude that this door remained open the remainder of the night. Chapter 9 sec. 14 Acts of 1890 says, "No miner, workman or other person shall knowingly..... open a door used for directing ventilation and not close it again,...." Here was another violation of the law which in itself would render the mine dangerous for the use of an open light beyond the 7th left heading.

A new and dangerous condition has arisen in the mines in this State in recent years. That is an excessive amount of dust as the result of mining machinery. Our laws provide for the watering down of dust in mines generating gas. A similar provision should be made for all mines wherein dust accumulates. Incident with mining machines comes the necessity of heavier shots. These shots often being prepared by men of little experience in blasting often "blow out." A blown-out shot is often the occasion of a dust explosion. In the Red Ash mine mining machines of the Harrison type were used. Large quantities of dust had accumulated in the mine and this dust was the principal agent of extending the scope of the explosion. A number of kegs of powder exploded in various sections of the mine, and these aided the explosion.

Of the forty six persons killed in this Red Ash explosion no one had sufficient external burning to cause death. Only a few of the dead had the hair burned off the head. The force of the explosion was quite violent as was attested by the condition of some of the bodies. A large number had fractured skulls and in some cases a large part of the skull was gone; arms and legs were broken in many cases, showing that the bodies had been hurled violently.

Aside from the 46 deaths resulting from the explosion three men were injured a short distance inside the drift mouth by the force of the air coming out of the mine with great velocity. This force was sufficient to wreck and pile up several cars on the outside of the mine.

Miners as a rule are a fearless class of men and take many risks of danger. A great many miners do not realize the danger of a gaseous mine which is dry and having dust in the rooms and gangways. A less number know the requirements of the State Mine law.

Ignorance of the law excuses no man, but in this case a knowledge of the law would often save the lives of many men.

I still contend that extracts of our mine law should be posted at all mines. Without the co-operation of the officials and em-

ployes at the mines the efforts of the Mine Inspectors are attended with unsatisfactory results.

Coroner's juries, sitting on mine disasters, should endeavor to render a verdict which would show wherein the mine law had been violated, if violated at all.

The following is the verdict of the Coroner's jury on the Red Ash mine disaster:

"We, the jury, find that B. B. Long and others came to their death by reason of an explosion of gas in the Red Ash Coal mine, in the County of Fayette and State of West Virginia, on the sixth day of March, 1900, caused by the lack of proper ventilation on that date."

Until we have some legislation governing the acts of workmen inside the mines of this State similar disasters are liable to occur.

Within the past five years a number of mines in this State have become gaseous. This department knowing of the encroaching danger endeavored at the last meeting of the State Legislature to have enacted a bill which had for its object the reducing to a minimum this liability of accidents from mine explosions and other causes.

I trust that this great disaster may awaken our legislature to a duty demanded by the conditions surrounding our great mining industry, and enact a few specific laws which may inspire a greater degree of discipline which is much needed at the mines in this State.

Our present laws are equal to any ordinary emergency that may present itself in a non-gaseous mine, but not for mines generating gas.

The fact that the mine boss at the Red Ash mine did not know how much air per man is required by the State mine laws to be admitted through the workings of the mine shows that little discipline would be inspired by his knowledge of the law. However, the ventilation was ample, had the doors been undisturbed. The evidence at the Coroner's inquest divulged the fact that there was some question in the minds of some of the employes of the Red Ash mine as to who had charge of the fan, but it was shown that either the fire boss or the drum runner had been starting the fan for two months previous to the explosion.

For the details of the rescue of the bodies from the mine and of the restoration of the ventilation of the mine the report of Mr. Edward Pinkney, Mine Inspector of the Third District, is hereby submitted.

The accompanying map shows the workings of the Red Ash mine. On it will be found the location of stoppings, doors,

regulators, overcast, fan, direction of air currents and location of bodies found.

Respectfully,

James W. Paul,

Chief Mine Inspector.

Charleston, West Virginia, May 1st, 1900.

List of persons killed March 6, 1900, by an explosion of gas in Red Ash Mine, Payette Co.

No.	Name.	Color	Age	Mar S	Wid.	Orph.	Total Dep.	Occupation	Date found	Where killed and found.	No.
1	John Day.....	W	22	X					Feb. 6	Main headu g. near drift mouth.....	1
2	William Day.....	W	16	X					6	.....	2
3	Mathew Quarles.....	C	40	M	1		5		6	.....	3
4	Samuel Jackson.....	C	29	S					6	.....	4
5	James Hackey.....	C	28	S			1		6	.....	5
6	Charles Foutle.....	W	26	M					6	.....	6
7	Jas. Washington.....	C	22	M					6	M. H. bet. 4 and 5 Rt.....	7
8	Norella Dwyer.....	C	28	M	1				6	.....	8
9	Simoon Fitch.....	W	25	M	1				6	.....	9
10	Novel C. Ramsey.....	W	25	M	1				7	5th L. at Cab.....	10
11	John Stone.....	C	35	M	1				7	.....	11
12	Edward Hamrick.....	W		X				Trapper	7	M. H. double parting bet. 6 and 7 Rt.	12
13	L. E. Dotson.....	W	29	M					7	.....	13
14	Robert Ball.....	C	22	M	1				7	.....	14
15	Isaac Morris.....	C	23				2		7	.....	15
16	Beverly Agce.....	C	22						7	.....	16
17	Smith Franklin.....	C	19						7	.....	17
18	Holister Noel.....	C	18						7	.....	18
19	Walter Dennis.....	C	21						7	.....	19
20	S. P. Chappell.....	C	20	M					8	5 Rt. 75 ft. inside.....	20
21	C. C. Stewart.....	W	30	M	1	5	6		8	.....	21
22	Charles Downey.....	W	23						8	double parting by room 13.....	22
23	William Steds.....	C	12	M			1		8	50 ft. inside room 13.....	23
24	Granville Holmes.....	W	45	M	1				9	M. H. X Cut 250 ft. from S Rt.	24
25	John Chitt.....	W	25			5	6		9	.....	25
26	Fred Arnold.....	W	20						9	100 ft. from S Rt.	26
27	William Massie.....	C	21						9	near S Rt.	27
28	A. J. Pruitt.....	W	35	M	1				9	.....	28
29	Berry Tucker.....	W	22	M			5		9	.....	29
30	Julius A. Samner.....	W	30	M					10	S Rt.	30
31	Samuel Shuff.....	W	25		1				10	.....	31
32	B. B. Long.....	W	40					Fire Boss.	10	near face.....	32
33	Ernest Long.....	W	12					Trapper	10	.....	33
34	Moses Daniel.....	C							10	Rescuers kept no record.....	34
35	Carl Downey.....	W	20						10	do	35
36	William Wood.....	C	20						10	do	36
37	John L. Wood.....	C	20						10	do	37
38	Arthur Hunt.....	C							10	do	38
39	Luther Thaxton.....	C							10	do	39
40	Abner Collins.....	W							10	do	40
41	Edward Harvey.....	W							10	do	41
42	Wm. Hamrick.....	W						Trapper	10	do	42
43	Thomas Long.....	W						Trapper	10	do	43
44	James Long.....	W						Trapper	10	do	44
45	Charles Perlander.....	W			1		4		10	X Cut on M. H. at 5 Rt.	45
46	Thos. L. Johnson.....	C	16					Trapper	23	Left P. turn air course 150 ft. from 1 R. overcast.	46

State of W. Va.,
Office of District Inspector.

Edward Pinkney,
Inspector of 3rd Dis.
Montgomery, W. Va.

James W. Paul, Esq.,
Chief Mine Inspector,
State of W. Va.

Dear Sir:—

I hereby report accident which occurred at the Red Ash mine situate in Fayette County, and belonging to the Red Ash Coal Co., on the 6th day of March, 1900, whereby 46 lives were lost including miners and other workmen, by an explosion, caused as is supposed by the igniting of an accumulation of marsh gas on the 8th left hand entry by some minor or other unauthorized workman entering said entry with a naked light before the fire boss had made his examination and given the said workman permission to proceed to their respective working places. The accident occurred about 7 A. M. I received a dispatch from the Company sent immediately after the occurrence at 11 A. M. It was not any lack of promptness on the part of the telegram or mining Company that caused me not to receive the message sooner, but on account of my being from home at the time the message arrived. I desire to also state that the Railroad officials extended to me all the assistance in their power by allowing me permission to ride on a fast freight in order that I might not be delayed in arriving at the scene of the disaster which I accomplished about 12:40 P. M. On arriving at the mine I found some men at work already and every effort was being made to restore the ventilation as early as possible. I immediately took charge of the work and from that hour on until your arrival at about 9 o'clock P. M. in company with Mr. Meade, Inspector of the Second Dis. I immediately superintended the work and in conjunction with you and Mr. Meade after your arrival until the ventilation was entirely restored and all the bodies of the unfortunate workmen recovered, which was accomplished by Sunday morning at 4 o'clock, March 11th, except two bodies, which however, were found a day or two latter. On my arrival at the mine much excitement and some feeling naturally existed, many stories, ideas, suggestions and rumors as to the probable cause of the accident were in circulation among the people assembled, notably among which was, that the fan had not been working for several days, this however, proved to be a false idea as it was proven conclusively at the inquest that the fan had been working all day Monday and far into the night on Monday, the day preceeding the accident.

The next idea suggested was that Mr. B. B. Long, who was acting as temporary fire boss on the fatal morning, was not an experienced man, and had that morning gone into the mine with an open light and not a safty lamp and had undoubtedly set fire to some accumulation of gas in some of the places, thereby causing the explosion. This, however was proved to be a false idea from the fact that when the body of Mr. B. B. Long was found and his safety lamp, a short distance from where he fell, all surrounding indications, together with the conditions of his body, clothing and safety lamp, even the hair on his head and other parts of his body not being burnt, was proof of a conclusive nature that the force created by the explosion came from another direction, and that Mr. B. B. Long was suffocated by after damp. Three other men were found on the same entry in rooms closely contiguous to where Mr. Long's body was found near the head of what is known as the 8th Right Hand Entry. It is a thoroughly understood fact by all men that in all branches of business, where large numbers of men are employed, that danger of some kind exists. Mining beyond all question of doubt has an equal number of dangers if not more and exist in a greater variety of forms than any other source of employment. Explosion in coal mines is one of the worst forms of accidents and singular to say, although true, have occurred periodically from some cause or other in every coal field of prominence in the world and invariably in the best arranged and most systematic operations in the different coal fields. It is an open secret to all coal miners that where marsh gas or any gas of an inflammable character is encountered the best system of ventilation is always adopted otherwise the seam would not be worked and it is from a knowledge of those facts that men stake their lives in mines of this description.

The verdict of the Jury on the day of the investigation was that the Red Ash accident was brought about by improper ventilation on that date, however, they failed to state or pass any opinion as to the nature of the improperness or by what means it was brought about. No evidence was produced to prove that any negligence in regard to conducting the air currents in a proper and systematic manner around the various workings previous to the explosion existed or had been complained of. During all my visits prior to the explosion I found this mine's ventilation arrangements in good shape and in good repair with the material used, and complying in every instance with the requirements of our Mining Laws. At the last visit paid to this mine previous to the accident the volume of air passing down the main intake was 23,790 feet per minute. At that time there were 96 men and boys all told working in the mine, making 248 feet per minute per man em-

ployed; the requirements of our Laws designate not less than 100 feet per man. By those figures it will be seen there was a surplus of 148 feet per man every minute. Now as the Jury failed to point out or pass an opinion how this improper ventilation was brought about which caused this accident, it is right and proper to point out causes which could bring about an accident of this character. Having been over forty years constantly employed in and around coal mines I can readily perceive there are various ways by which an explosion in a mine such as the Red Ash Mine could be brought about, by a combination of the actual causes existing and those which may be brought about by careless workmen. If care, caution, good judgment and a reasonable amount of discretion is not observed by workmen and officials alike, for instance, if a ventilating door is left open for some time; workmen passing designated stations and entering working places before having been authorized to do so, with naked lights; the exploding of a keg of powder; by the blowing out of a heavy shot, thereby stirring up a large cloud of fine dusty coal, which in a dry mine is invariably of a highly combustible nature, and especially so after having laid in the old worked out and abandoned room and air courses for some time, with currents of dry air passing over it; and sudden and unexpected outbursts of gas, or stopping the fan for an indefinite period. Those are causes which are liable to exist and for which there is no remedy except good judgment and care on the part of the men in charge and the workmen in general, and may be brought about at any time by accident, carelessness, insubordination or recklessness on the part of either workmen or any one filling an official position and not doing his duty. It has been a well known fact by the proprietors, officials and all workmen that marsh gas in more or less small quantities has been given off in this mine for some time, therefore it was not only the duty of the officials but also all workmen to use all precautions necessary and within their province for their own safety, but the thorough and efficient system on which this operation was conducted, so far as the driving of entries and breakthroughs, together with fan power, the large volumes of air which was being conducted on the most approved system throughout the mine during the working hours and part of the night, it was therefore considered by all parties connected, operators, mine officials and workmen, that there was no serious danger to be apprehended. No explosion of even the smallest calibre to injure any one had ever occurred at any previous time in this mine. There is also no record of at any time any large accumulations of gas having been encountered in any part of the mine, or of any unusual bodies of gas being given off unexpectedly or otherwise. There are several entries in the mine where gas has never been known to exist and the places where

it was usually found were the innermost or advance entries, or in other words, at the head of the main entries. All entries either cross entries or otherwise situate at the greatest distance on a bee line from the drift mouth into the interior of the mountain generated gas at their face. All cross entries have parallels thereto. In other words the entire operation is conducted on the double entry system, so far as cross entries are concerned, and of the main or advancing entries there are three. These entries are driven fifty feet apart. These main entries dip steadily at about 1 1-2 or 2 per cent. The grades on the cross entries however are somewhat irregular, sometimes on the rise and sometimes dipping. The driving of breakthroughs was somewhat governed by the grades encountered, when going to the rise seventy or seventy five feet being the usual distance driven apart, when level or dipping, one hundred feet or less. It is at the head of those entries when advancing up steep grades that gas is found usually by the fire boss when making his examination each morning and there is strong reason to think that the first cause of this explosion, which occurred on the morning of the 6th of March, was caused by an accumulation of marsh gas on the 8th Left Entry, which accumulation was brought about by one of the ventilating doors being left open on the night of the 5th by some workmen who left the mine after quitting time. This is very frequently done by miners when there exists any impediments, such as a chunk of coal or other obstruction; not however with any intention of wilfully causing any injury but from force of habit, acquired in mines where no danger exists. This, of course, would at once cut off ventilation from the remainder of the mine and especially that portion which is known to be the only portion of the mine generating explosive gas, and thereby establish a short circuit to the return air-way and thence to the fan way, however, from practical observations made in this mine both before the accident and since the restoration of the ventilation arrangements, I am of the opinion that had the fan ventilation of this mine been suspended for a much longer period than it possibly could have been on the night of the 5th and especially during the night and at this season of the year no body of gas sufficiently large could have accumulated to have created any explosion equal in magnitude to the one which occurred at the Red Ash Colliery on the 6th day of March at 7 o'clock A. A. The fact was established by testimony on the stand on the 13th of March when the Coroner held the inquest, that the men had been working in the mine during Monday the 5th as late as 12 o'clock at night and left the mine **at that late hour**, which conclusively proved that the fan was working and the ventilation in proper form up till that time. It was also stated

the fan was started about 6:35 A. M. on Tuesday. According to those statements the fan stood about 6:35 hours at the most, allowing that the fan stopped immediately after the power plant was stopped which I understand does not occur. The plant is left charged at 70 pounds pressure and the fan is allowed to run until this force is exhausted. The temperature is much lower, especially at this season of the year, outside of the mine than it is inside and particularly so during the night. This mine going steadily to the dip, say at 1 1-2 per cent, and the head of the main entry being 4500 feet distant from the mouth, in a straight line, makes the head of the main entry at least 70 feet below the level of the drift mouth of the mine. The system of ventilation in operation at the time of the accident was to conduct the fresh air directly to the head of the main entry along the middle entry of the three driven and split it into two currents, allowing an equal amount to return on each side, thereby ventilating each side of the mine separately. This of course was accomplished by the use of ventilating doors placed in the respective air ways where necessary and by the construction of an overcast or air bridge at the No. 4 entry. Hence, allowing the temperature on the outside to have been on this particular night as much as 40 degrees, which would be a high temperature during the hours between 12 and 6 o'clock in the night, at this season of the year, the mine on the inside would not be less than 70 degrees and this difference in altitude and temperature would have undoubtedly caused considerable natural ventilation and to some extent have aired this mine during the hours the fan was stopped, particularly in a mine dipping as this mine does and at an altitude of 400 feet up the mountain, had the ventilating doors at the mouth of the cross entries all been in proper position. It is a well known fact to all miners that cool, dense air will always force its way down a dip working and drive the light and rarefied air and gases out and especially in a mine of this description where the roof is exceptionally good and the seam thick, few falls of slate exist to cause any obstructions of a serious nature in the return airways.

For some years the mining has all been done in this mine, practically speaking, by machines operated by compressed air. A large quantity of the coal mined out by those machines, while preparing the seam for blasting, is pulverized into a fine dust and more particularly so in the New River seams. In many instances it is almost as fine as flour and of a very inflammable character, this is usually thrown to one side by the machine operators' assistant; other men are employed to load the coal produced by those machines. This being a very dry mine, when the rooms have been driven in a short distance from the entries, this fine dusty coal produced by the machines

during the process of mining is somewhat disagreeable to load, from the fact when thrown from the shovel into the car the very fine particles rise and to some extent create a cloud of dust which makes it rather disagreeable and undesirable for breathing purposes, hence the people employed at this particular class of work do not clean the floor of the rooms up as clean as a pick miner would have done, however, the quantity left being only small, inasmuch as this class of coal is a desirable commodity for coke making purposes, it was to the Company's interest to get all they could of this product and the quantities left were never considered dangerous. In this mine, like all other extensive operations, there are large quantities of blasting powder regularly used. It is customary all through this region for the miners to take powder into the mine by the keg. It is a well known fact that this mine was no exception to the rule. Judging from observations and inquiries made at several other mines closely contiguous to this mine and using Rush Run, Brooklyn and Cunard Mines for instances, as a criterion by which to be governed, it is safe to say that there was not less than twelve or fifteen kegs of powder or probably more in the Red Ash Mine at the time of the accident. Especially is this true during the fore part of the month as the miners get in their supply on the 1st of the month. Many old scorched and battered powder kegs were found at various points after the ventilation was restored, and one keg, nearly full, unexploded, was found in the return air way by myself and Mr. Laing. Taking powder into the mine in large quantities is a considerable source of danger and may at any time, through carelessness on the part of a workman, cause an accident of a more or less serious nature and would beyond all doubt add materially to intensify and prolong an explosion caused by any other source in a mine so pronouncably dry as the Red Ash Mine.

There is yet another source of danger, which, had the accident occurred in the latter part of the working hours, might have been taken into a considerable extent as a factor in the explosion. I refer to the consumption of powder in the blasting of the coal prepared by those machines and miners, thereby creating large volumes of dense smoke or what is generally known as carbonic oxide, which, under some circumstances, is explosive and beyond doubt has caused many serious accidents in the various coal fields of this and other coal producing countries. There are few old and experienced miners who have not on many occasions seen the smoke light up all around what is known in mining parlance as a hanging shot, in other words, when the charge of powder was only sufficient to crack the coal seam up the ribs of the room and cause it to bag down from the roof thereby forming an actual opening all around

the coal mined and hanging as it were by small undetached fragments along the line of fracture at the back of the coal so mined. On many occasions old miners, when it is thoroughly understood by them that no danger exists, apply their lamps and set fire to this product for a double purpose, first to burn the smoke and secondly, some times by the expansion the cut is forced to the floor. I do not wish you to understand that I entertain the idea that powder smoke cut much of a figure in the Red Ash explosion. I have merely mentioned those facts above in order to call your attention to the fact that I do entertain the idea that powder was to some extent, a factor in the recent disaster at the aforesaid mine. As before stated the position of all the wreckage of doors, cars, rails, posts, powder cans, brattices, etc., plainly indicated from what direction the force started and the courses traveled. This point is conceded by all men of recognized ability in mining circles and particularly so by those who have had previous experience in matters of this description, who have examined the mine since the restoration of the ventilation and before the effects of the explosion were cleared up. It is also conceded by the same Commission of experts that B. B. Long the acting Fire Boss on the fatal morning and those men found on the 8th right entry with him died from suffocation in the black damp which was produced by the explosion, that was started in the 8th left hand entry by some persons entering the said 8th left hand entry before the Fire Boss had got around to that point. It is a very well understood fact by all men who follow Fire Bossing as an employment that a regular system is generally adopted; it being the usual custom to start in at the right hand side of a mine and work around towards and finish on the left hand side of a mine. This custom or custom of a similar nature is as old as the mining business, and has been adopted beyond any question of doubt by force of habit in all mining localities where Fire Bosses are employed.

In referring to the point from where the explosion first had its origin, the question naturally comes to the front—Why should this accumulation of marsh gas have taken place at this particular point in preference to any other point closely contiguous also to this part of the mine, where it was known marsh gas was being generated? In answer to this question I desire to state in going over the ground, and commencing at the mouth of the 8th left entry, I find the following conditions to exist: That is to say, the face or head of the main entry is 700 feet distant from the mouth of the aforesaid 8th Left Entry, going directly or near about North at a dip of about 1 1-2 per cent. along this same line of route, and about 400 feet distant from the 8th Left Entrys, there are two other Entries turned off at right angles from the main Entry and

known as the 9th Right and 9th Left Entries. Those entries are each in from the main entry about 200 feet and though it may seem singular, it is nevertheless true, both those entries are dipping, although traveling in opposite directions from the Main Entry, equally as much as the Main Entry, and at the time of this accident occupied about the same level.

Again, commencing as before at the mouth of the 8th Left Entry, which is turned at right angles from the main entry, I find it in a distance of 450 feet to the face and is running a westerly direction, and for a distance of about 350 feet going up grade at about 2 per cent at which point it turns over and is now going down grade at about the same rate, at the time this accident occurred, the difference in the altitude between the highest point on the 8th Left Hand Entry and those of the head of the main entry would at least be 15 or 16 feet. By taking into consideration those existing conditions, it is very easy to determine that this entry would become a natural gathering point for all gases of a light and inflammable character which was being generated in this section of the mine, that is, the Main Entry, the 9th Left and any rooms situate on the left of the Main Entry on the in-by side of the 8th Left Entry, in case the ventilation arrangements were in any manner damaged or any doors in an improper form or left open on the out-by side of this 8th Left Entry. It is also a well known fact that this is the principal section where marsh gas is being given off; hence, there is no doubt but that all the gases generated in those places during the period that the ventilation was cut off, from some cause, accumulated in this concave on the 8th Left Entry, from the fact it is natural for them to gravitate to the highest point when the movement of the ventilating column is suspended.

The question at this point arises—In what manner could this ventilation be so effectually cut off as to allow the entire body of gas generated during the night to accumulate on this entry at a point some distance from the face of this entry, and at a point where, if any air was traveling at all in this section, it would have to pass this point, and where no accumulation of a dangerous character has heretofore been known to exist? Had a sudden outburst of gas occurred at or near this point, this would have been a reasonable cause, but no indications whatever of this kind are in existence, except it came entirely from the coal seam and exhausted in a short time. The fan has no doubt on many occasions previous stopped for a much longer period and at seasons of the year when conditions for natural ventilation were less favorable than it was on the night of the 5th, and no explosion even of the smallest calibre occurred; or has there ever been any reports or complaints made to me

of any large quantities of gas being found at any particular parts, caused by the stoppage of the fan or otherwise. At the examination on the 13th day of March, Mr. George Bryant testified on the stand that he and his laborer were at work in the mine on the night of the 5th, the night preceding the explosion, on the 7th Left Entry until 12 o'clock at night. When asked if he closed the door at the mouth of the entry when he came out, he answered, "That he gave the door a push." Now, the chances are very strong that some obstruction in the shape of a chunk of coal or other material prevented that door from closing, if that man ever tried to close it. It would not have been policy for that man to convict himself of a violation of the Mine Laws, after an accident like that which had just occurred. If such was the case that this door was left partly open, this would form a short route direct to the return and so on to the gang way, cutting off the entire ventilation from the inner entry where the generation of gas is only known to exist, and would bring about an accumulation of gas at the point from whence this explosion started. After having gone over the mine since the ventilation has been restored, having carefully noted at what points the most damage was done, the class of property damaged and to what extent damaged, and for what purpose used previous to the explosion, at what points the most intense heat and pressure seemed to have been exercised, together with the courses traveled by this cyclone of fire and dust, I desire to say my opinion as to the first probable cause and the attending causes which contributed largely as factors in this serious accident, is that I am strongly of the opinion that the 7th Left hand entry door was left partly, open on Monday night the 5th of March, and stood open until work time Tuesday morning. As Mr. B. B. Long, the acting fire Boss was late that morning and did not get up to the mine until the first trip was run on the incline; it is quite evident that some of the miners went in with him from the fact that three men were found on the same entry and closely contiguous to where he was found. I am also of the opinion that where B. B. Long was found it was the first place he had been in on that morning. Other men and drivers followed in immediately after him as far as the Double parting where the motor hauls from. At this point eight bodies and some mules were found. Some men, however, were found above the upper double parting near the mouth of the 8th Left Hand entry and had the appearance from the condition they were in of having been hurled by the blast for some distance, it is quite evident those men found above the upper double parting had proceeded on to their work without waiting to see the Fire Boss and in all probability caused the explo-

sion of gas on the 8th Left Entry. When this gas was ignited the rapidity of the expansion and the intense heat generated had also created an intense pressure at this particular point which had rushed off in four different directions, which was plainly indicated by the positions of the damaged property after the ventilation had been restored. The directions referred to were mainly forward towards the heads of the 8th Left and Main Entries, backwards toward the 7th Left, and also towards the mouth of the 8th Left Entry, and thence principally along the line of the main entry towards the mouth of the mine. As no damage of any moment or indication of intense heat existed at the head of the main or on 8th Right, excepting the blowing out of the stoppings, which, was no doubt, caused by the excessive pressure, it is not necessary to make here any special comment on those entries. As before stated, the rapidity of the expansion and the intense heat generated by the ignition of this body of marsh gas, undoubtedly created a powerful pressure. It is natural that this pressure would rush along the line of least resistance. From this point forward to the head of the main entry, the work developed is very limited, of recent date, and principally, narrow places. On the other hand, leading back towards the mouth of the mine, the developments are very extensive and some sections of this work have been in service as return air ways for several years. It is a well known fact by all men employed in coal mines that strong currents of air, kept in constant motion, such as existed at the Red Ash Mine, carry off regularly from the main Haulways and other working places, quantities of very fine coal dust, and when the air currents enter the old workings and are allowed to scatter, thereby reducing the speed of the currents, this dust is then deposited on the floors and small shelving projections on the ribs of those old rooms and return air courses. Thus it will be seen what keeps a dry mine safe at one point, under certain circumstances creates a source of danger in time at another. This body of dust thus carried in the air currents is not only more excessive, but is also more dangerous in the winter than in the summer months. From the fact, when the air enters the mine cool and becomes heated, it takes up moisture during its progress if any exists in its line of route. On the other hand, in the summer, the air enters the mine warm and cools off and all the moisture it contains is deposited on roads, roof and sides, and assists to keep the dust down at all points of the mine; and a large quantity of our old and experienced miners are aware of this fact from observation. As before stated, there is no doubt but that the pressure created rushed along the line of least resistance, stirring up by the speed and pressure

exercised in every avenue of escape, the fine dry coal dust which in turn exploded, and at various points received an impetus both in force and heat, by the explosion of powder, this was especially noticeable at some points where there is every reason to believe that powder existed, by the presence closely contiguous of scorched and battered powder kegs, also pieces of roadways torn up, the rails twisted out of shape and thrown violently against the ribs. At points where boxes for the storage of miners tools and other requisite supplies were stationed before the explosion, there was also every evidence of exceptionally increased intensity of heat and pressure at those particular points. By the cakes of charred and frissled dirt which it would seem had been torn from the roadbed, hurled with immense force and pressure against the ribs of the rooms near the entry, or in other words, in the narrow necks, and there cooked into coke by the intense heat; when in the same locality and not far distant, no damage of any consequence or any indications of extreme heat or force seem to have been exerted. This is especially the case on the 7th Left Entry at the No. 7 Room and also on the Back entry or air way of this 7th Left Entry. At those special points I have not the least doubt, powder existed and was exploded. On the 5th and 6th Left hand entries, no especial damage was created. At no points were there any roadways damaged and only on the double parting closely contiguous to the main entry was there any indications of any intense heat or excessive pressure. At the head of those entries, there was absolutely nothing to indicate that anything of an unusual character had occurred, excepting a couple of mine cars which had been left standing on a steep grade, had been started by the concussion and had run down the entry a short distance and jumped the track. From the 5th Right through the air-ways to the fan, there was nothing unusual in appearance excepting small fragments of lumber here and there which had no doubt been blown in by the pressure exerted from the other sections of the Mine. And, at one point where the returns are being straightened by driving new places, a keg of powder with a roll of paper laying on the top of it was found in an undisturbed condition. Returning from the fan and again commencing at the 8th Left Hand Entry and coming along the line of the main entry and meeting the fresh air currents, the force seems to have been very strong and fierce. Although the road was damaged, several mine cars were badly damaged and twisted around in various forms on the double parting where eight men were found, and the trolley wires were also torn down all along the line of route. There is no doubt but the same conditions of support existed on the line of Main Entry

that was found in other sections of the mine, namely, kegs of powder. From information gained, I understand at least 4 or 5 kegs were taken in by miners on the morning of the accident, which must have been on the road when the explosion occurred and none has since been found. It has now been ascertained that four kegs of powder were taken in by men found at or near this parting. There was also every indication on the double parting that the force had received an impetus of a radiating character from the position occupied by the empty cars in particular, and some fragments of powder kegs were, I understand, found, but I did not see them. Those cars weighing at least 1800 pounds, having four metal wheels 18 inches in diameter and each wheel weighing at least 120 pounds, standing on a railroad laid with 30 pound steel rails, and on in line with the course of the blast and only a few of them, as the bulk of the cars were loaded, would undoubtedly have been drawn out of the parting along the entry at least some short distance if some counteracting force had not existed; but instead were twisted and torn in every direction in the middle of the parting. It is also certain that a proportionate amount of fine dust stirred up in the return airways and old rooms, closely contiguous together with what was already on the main line largely assisted to intensify the blast along the line of this main entry, which entirely destroyed the ventilation arrangements, including doors, brattices and overcast. When the force reached the overcast which is situate at the inner end of the Rock drift, which drift is about 500 feet in length, it would seem it became congested at this point and split—one portion, no doubt, all the drift would contain in proportion to the pressure exerted, going straight toward the drift mouth, the other portion rushing along the line of least resistance open for its course, which was the 4th right hand entry, and turning to the left of this entry, rushed down the No. 20 room, coming up from the 5th right, carrying a truck with a machine, and no doubt, a keg with powder in it thereon, a distance of some 75 or 80 feet, and dashing the whole outfit with such violence against the left hand rib of this right entry, as to break the truck into smithers and damage the iron man almost beyond repair. Here again is evidence that powder, no doubt, assisted materially to intensify this explosion, as the indication was present of intense heat and pressure by the roadways being torn and twisted and scabs of congealed coal, dirt on the wall sides, was found in the neighborhood of where the truck had been standing, and some short distance from the entry which had undoubtedly been hurled there by immense radiating pressure and roasted to coke by intense fresh heat. Apart from the

•

last quoted damage, there was very little damage done on this 5th Right Entry excepting, however, the destruction of the doors, brattices and few mine cars to some extent displaced but very little damaged on the double parting; the trolley was also down. About the same conditions existed on the Double parting on the 5th Left Hand entry. Three or four mine cars were displaced and twisted round to some extent and partly turned over. The loaded cars were somewhat jammed up but few of them had sustained any damage worth mention.

And now having gone over the entire ground where any men previous to the explosion were employed, excepting the 8th right hand entry, I desire to call your attention to the fact that none of the miners or other workmen who were lost in the accident, had reached their working places, excepting, however, those men on the 8th Right hand entry with Mr. B. B. Long and one man in No. 10 Room on the 5th left entry. One man, however; was found on the main entry about 50 feet below the mouth of the 8th Left Entry and, I understand, in a badly mutilated and burnt condition. There was also a man and a boy found about 150 feet on the inside of the 7th Left hand entry door. Those bodies were also in a bad condition, however, I do not think that they had anything to do with the explosion of the gas, but they were in line to be right with the explosion when it had reached that point. It also strongly points to the fact they were on the road to their respective working places before the Fire Boss had made his round. I furthermore desire to call your attention to the fact that this Red Ash Coal Company had a system of rules in typewritten form, instructing their Fire Bosses as to the duties required of them. There is no doubt the majority of the miners were aware of this fact; if not, in my opinion, it was the duty of the Mine Boss and Fire Boss both to instruct them. If those rules had been rigidly observed, no accident could have occurred at the hour this one occurred. From the fact there could be very little fine dust in the atmosphere of the mine at that early hour. On Friday night, March the 9th, I personally superintended the building of seven stoppings, one each across the 8th left and main entries and five on the 8th Right entry, this restored the ventilation to the innermost holed breakthrough on the 8th Right Hand entry leading to the back entry or air-way of said 8th Right hand entry, the entry on which the Fire Boss was found next day at the head or thereabouts. When the ventilation was restored, I found the following conditions to exist: First, There was no damage created whatever, excepting the brattices blown out. There was one empty car which had doubtless been left standing on the track in the mouth of the first room on the right handside of the entry; this

car had been lifted off the track by a force coming from the direction of the 8th Left Entry and thrown over to the rib of the room on the left side. In the No. 3 Room on the 8th Right entry, there was standing on a tolerable steep grade a machine truck with a small scotch of wood about four inches square and one inch in thickness in front of the wheel nearest the mouth of the room. The machine was sitting on the operating platform undisturbed. A man was found in the mouth of the No. 4 Room on the left side rib close against the rib, stretched out with a chunk of coal under his head for a pillow. In the back entry in the No. 6 Room, another man was found stretched out close to the left hand rib on his loose coal and an empty car beside him. He had no doubt taken this car in from the mouth of his Room just before the explosion occurred. A short distance down this back entry another man was found lying face downwards, in a rather humped up position, by the side of the roadway and closely contiguous to the rib of the entry. When found, none of those men had any indications of being scorched. I am also informed that the Fire Boss, Mr. Long, was not burnt on any part of his body or clothing, as it has been very currently reported and no doubt earnestly believed that Long caused this accident by either carelessness or his reputed inability to fill this position. Setting aside all opinions which have been formed by the different parties who formed and have expressed them, and for the information of the mining people in general, I desire to call your attention to the following facts:

This 8th Right hand entry is turned off the main entry at right angles and running in an eastern direction, starting at the mouth, it is in about 550 feet to the face; for about the first 150 feet it is dipping moderately as near as I can judge, at about one per cent. For the next 200 feet it is practically level and not only damp, but at some points in this 200 feet there is considerable water standing on the road-ways, and also in the Breakthroughs between the entry and air-way, which is an exception in this Mine. The development on this entry is also very limited and of recent date. There are some rooms turned on it. The innermost three rooms are, practically speaking, only turned off the entry and are in but a very short distance. The 8th Right Entry and air-way have no connections with any other part of the mine, excepting where it is turned off the main entry and crosses the main entry air-way; or in other words, none of the rooms have been sufficiently advanced as yet, to break into any rooms coming from any of the surrounding entries. Mr. Long's body was found at or near the head of the entry. It is plain, the body of gas in this entry was very small or he would not have been

at that point, from the fact the men found at or in the back entry or air-way, would have to pass through the innermost Holed Breakthrough, and no doubt did so with naked lights about the time Mr. Long started up to the face of the entry.

It is usually the custom for Fire Bosses first to test or examine the place with the safety lamp and see how much gas there is in the place; they then step back, plant their safety Lamp in a safe place on the floor and proceed to brush it out. It was the custom at this Mine for the Fire Boss to use the compressed air to brush the gas out where he could do so. Mr. Long's lamp was found just 24 feet back from the face of the entry and close to the rib; the place no doubt where he had set it preparatory to commencing to brush the gas out. It is plain he set it down for where his body was found, he was lying with his head towards the face of the entry on his back and legs spread apart, in the position of a man who had fallen backwards; his vest with a gold watch in the pocket, at his feet, an indication that he had taken it off and had attempted to use it as a protection against the suffocating effects of afterdamp, which is frequently done by men under such circumstances, and the lamp was closely contiguous to where his body was found. If he had the lamp in his hand when he fell it would undoubtedly have been found in a different position and more towards the middle of the entry. From the point where Mr. Long was found, the grades are very gentle and the amount of gas tailing back or stretching even to where his body was found would have been very small, and even supposing that this amount had been ignited, which there is not the slightest evidence to justify that it was, all the surrounding circumstances were such that it could have received no support of importance until it had traveled a distance of over 600 feet and had crossed the main entry and made connections with the gas on the 8th Left entry and the old working behind with all the accumulations of fine, dry dust, and from the fact that the workings were of such a limited character and the greatest part of the distance, the roadways had water standing on them, therefore, it would have contributed nothing in the shape of dust to assist its progress and would undoubtedly have spent its force before doing any serious damage or reaching any other point where gas might be standing. In regard to the man B. B. Long, some comment has been made in reference to his ability to fill the position of Fire Boss. This seems a little singular, from the fact he was a man 40 years of age and has been a miner for over 20 years, to my knowledge. Mr. Long worked under me for a period of eight years or over, and I feel it my duty to state that I always found him straightforward, trust-worthy, sober, reliable, anxious to acquire knowledge and improve his condition in life,

The officials of the Red Ash Coal Co. and all unbiased people have this to say of him. He had been at the Red Ash Mine for a period of at least eight years; had mined coal in places generating marsh gas; had acted in the capacity of temporary Fire Boss for nearly two years. It is a well known fact to all men in connection with the mining business, who have been employed in fiery mines, that it does not take a man of exceptional educational ability or one to be thoroughly versed in the Chemistry of gases to make a good Fire Boss. For numbers of men, who could not write their own names, heretofore, have been known far and wide as very efficient Fire Bosses, where gaseous mines exist, as useful and valuable men and men in whose hands workmen would trust their lives without scruple or fear. The charge raised is that he has had no experience. If eight years service, in a mine where gas is generated, by a man of Mr. Long's age and aggressiveness is not considered enough of experience, because he was a West Virginian, it must be very humiliating indeed for us people who are still in the land of life to think we are measured by such a standard. With no disrespect to the people of other and older mining countries, and where more rigid mining laws exist our casualties will compare favorably with any of them. It is no doubt true we have much yet to learn in the Science of mining, but very much like our neighbors, *in time* we will undoubtedly get there. On the 16th day of March, at three o'clock in the afternoon I was making an investigation on the 8th right hand entry, where Mr. B. B. Long was found, in company with Mr. George MacKintosh, Mine Boss from the Quinnimont Mine, and Mr. John Laing of Red Ash Mine, and found in presence of these gentlemen, Mr. B. B. Long's safety Lamp lying on its side partly covered up with fine dust, but otherwise uninjured, immediately against the left hand rib of the entry, and about four feet above the in-by corner of the Breakthrough which is being put over to the back entry. On this entry there is no evidence of intense heat whatever. And it is my opinion that no gas was exploded at all on the 8th Right entry, and that the Fire Boss, together with the three men found on the same entry were suffocated by afterdamp created by the explosion at other points. Having had a good knowledge of the mine for sometime previous to the explosion, judging from past observations made in regard to the keeping up of doors, brattices, driving of Breakthroughs, etc., I would say I have always found them in good shape and have never had one single complaint from any of the workmen employed at this mine. Since the accident I have assisted to restore the mine to a safe condition and have carefully looked over the entire situation in an unbiased manner and through the eyes of a practical miner. I have introduced no scientific theories

or argument in regard to the cause of the accident or the manner in which it might be brought about, but those which can be understood by the plainest and most unlearned of men. As before stated, the ventilation of the mine has been restored to a safe condition, the bodies of the unfortunate workmen all removed from the Mine, and the mine resumed operations again on the 26th day of March, after a suspension of twenty days. The air currents passing through the mine on the 9th day of April, 1900, was 22,000 feet per minute, and the number of workmen all told inside, 98. In order to further insure the safety of this mine in the future, the Company has assured me they will put in another fan in addition to the one already installed, as soon as it can be secured, and the arrangements established for a double system of ventilation. This is the only practical way that can be adopted from the fact that the air currents on the present intake if increased, would be so strong and swift that it would be impossible for the workmen to carry open lights thereon. After having made careful inquiry in regard to the names, ages and family relations of the men lost in this accident, it becomes my painful duty to submit to you the following list of miners names, together with the number of widows and orphans as a result of this dreadful occurrence:

Name of Person.	Married or Single.	Age.	Dependent.
A. J. Pritt.....	Married.....	35	Wife and 4 children.
Arthur Hart.....	Single.....		None.
Albert Collins.....			
Berry Tucker.....			
B. B. Long.....	Wife dead.....	40	
C. A. Foute.....	Single.....	26	
C. C. Stewart.....	Married.....	30	Wife and 5 children.
Charles Downey, and.....		23	Invalid Mother.
Carl Downey, brothers.....	Single.....	20	" "
Charles Perfiader.....	Married.....		Wife and 3 children.
Edward Hammick.....	Single.....		None.
Ernest Long.....		12 $\frac{1}{2}$	
Ed. Harvey.....			
Fred Arnold.....		20	
Granville Holmes.....	Married.....	45	Wife and 5 children.
Hollister Noel.....	Single.....	18	None.
Isaac Morris.....		23	
James Hackney.....	Married.....	28	Wife.
James Washington.....		32	Wife and 3 children.
John Stone.....		35	Wife.
John Day.....	Single.....	22	None.
John Clair.....		25	
J. A. Sauner.....	Married.....	30	Wife and 1 child.
Joe Long.....	Single.....		None.
John L. Ward.....		20	
L. E. Dotson.....		20	
Luther Thaxton.....			
Moses Daniels.....			
W. C. Ramsey.....	Married.....	25	Wife and one child.
Novella Dewes.....	Married.....	28	Wife.
Robert Ball.....	Married.....	22	Wife and one child.
Sam. Jackson.....	Single.....	20	None.
Simeon Fitch.....	Married.....	25	Wife and one child.
Smith Franklin.....	Single.....	19	None.
Simon Chapple.....		20	
Sam. Shuff.....		25	
Thomas Long.....			
Tom. L. Johnston.....		16	
Beverly Agee.....		22	
Wm. Day.....		16	
William Quarles.....	Married.....	40	Wife and 4 children.
William Massie.....	Single.....	20	None.
William Sleds.....	Married.....	42	Wife.
William Ward.....	Single.....	20	None.
William Hammick.....			
Walter Dennis.....		21	

And now having reported all the information possible in regard to this serious accident, having expressed my opinion in a truthful manner, and to the best of my knowledge and judgment, I desire to particularly return my sincere thanks to the officials of the various Coal Operators, who spontaneously and without any solicitation came forward with crews of workmen and placed their services at the disposal of the Inspection department and rendered such valuable services toward the restoration of the Mine's ventilation and the recovery of the bodies of the unfortunate workmen. I also desire to thank you for your kindly advice and valuable assistance.

Hoping the above remarks will have your approval and the approval of the public in general, I have the honor to be,

Yours very respectfully,

Edward Pinkney,
Inspector Third District,
State of West Virginia.

Suggested by E. Pinkney.

	Mines	1900.
To Mr.	Fire Boss,	Mine.
Sir:		

The following are the rules to govern your work:

- 1st. It is your duty and is required of you every morning when you enter the mine to hang in a conspicuous place, at the mouth of the mine, a plank board one foot square with day and date, and also your initials thereon, to insure the miners and other workmen that you are in the mine. You will also hang a board of the same dimensions as above at the mouth of the mine, at the first cross entry leaving the main entry on which there are any working places, marked danger, and allow no miner or other workman to pass this point until you have reported in person to this particular point that all is safe, and have ordered them to proceed to their respective working places.
- 2nd. It shall be your duty and is required of you to visit all working places in the mine once every morning before work time and leave your initials and date of day marked on the miners shovel or some thing whereby proof of the examination may be established. You are not at any time to assume that a place is safe where fire damp has not been found, inasmuch as when gas is found at one point in a mine it is likely to make its appearance at another when least expected, and thereby cause a serious accident.
- 3rd. If at any time you should meet with a large body of gas which in your opinion you could not govern in time for safety you must at once fall back to where you meet your miners and other workmen and order them out of the mine at once, reporting at once to the Mine Boss and Superintendent, and see that no one enters the mine until such danger has been entirely removed by you and what proper assistance you may need or require.
- 4th. It shall be your duty to provide yourself with a copy of the Mining Laws of the State of West Virginia, in order that you may become acquainted with their provisions, especially as to ventilation. If in any case it comes under your observation that the Mining Laws are being violated or disregarded in the operation of the mine or the rules of this particular Company, that is to say should any man or men disregard the signals of danger and proceed past the designated point without having been first ordered by you

to do so or to have passed through a door and failed to close it, when no one was present to do so, you will at once notify the Superintendent and Mine Boss of such violation.

Signature of _____	Signature of _____
General Manager.	Mine Boss.

CHAPTER XIII.

ACCIDENTS.

One hundred and forty-one were killed and one hundred and seventy-six were non-fatally injured at the coal mines in the State during the year. This is the greatest number ever killed within the state for any previous year, being an increase of 52 over last year. This is an abnormal increase due to the 46 persons killed in one accident at Red Ash. There is a decrease of 17 non-fatal accidents under last year.

Falls of the roof were responsible for 54.56 per cent. of all accidents; 18.29 per cent. from gas explosion; 15.77 per cent. from mine cars; 2.83 per cent. from powder explosions and 0.31 per cent. from dust explosion.

It may be observed that mine cars come within 2.52 per cent. of being the cause of as many accidents as gas explosions. Last year gas explosions were responsible for only 1.43 per cent. of the total accidents.

This year Fayette heads the list in the number of accidents, having had 67 deaths, including the Red Ash victims of which there were 46, and 35 non-fatalities. McDowell had the next highest, having had 30 fatal and 63 non-fatalities. Marion had 13 fatal and 10 non-fatal accidents and Tucker county had 10 fatal and 9 non-fatal accidents. In no other county was more than four persons killed.

The tables following give more details relative to accidents:

Table showing the number of fatal and non-fatal accidents, their causes, etc., in the State by Counties, 1899-1900.

(F. means fatal; N. F. means non-fatal.

[illegible]

1899-1900.

Table exhibiting the causes of fatal and non-fatal accidents
and the number and percentage by each cause.

CAUSES.	Fatal.	Non-fatal.	Total.	Percentage.	
Falls of slate.....	45	76	121	38.17	} 54.56
Falls of coal.....	12	33	45	14.19	
Falls of coal and slate.....	3	2	5	1.57	
Fall of roof.....	1	1	2	.63	
Powder explosion.....	6	3	9	2.83	
Gas explosion.....	50	8	58	18.29	
Boiler explosion.....	1	.....	1	.31	
Dust explosion.....	.....	1	1	.31	
Mine cars.....	15	35	50	15.77	
R. R. cars.....	3	.....	3	.94	
Electricity.....	1	1	2	.63	
Elec. locomotive.....	1	1	2	.63	
Steam locomotive.....	2	2	4	1.26	
Mine machine.....	.....	2	2	.63	
By mule.....	.....	5	5	1.57	
Machinery on tippie.....	.....	1	1	.31	
Wrestling with trapper.....	.....	1	1	.31	
Repairing.....	.....	1	1	.31	
Narrow gauge R. R.....	.....	1	1	.31	
Fell on pick.....	1	.....	1	.31	
Loading R. R. steel.....	.....	1	1	.31	
Rail curver.....	.....	1	1	.31	
Totals.....	141	176	317	100.	

Accidents tabulated according to the days of the week on which
they occurred.

1899-1900.

FATAL ACCIDENTS.

	Sunday.	Monday.	Tuesday.	Wednes- day.	Thurs- day.	Friday.	Saturday	Total.
Inside.....	4	22	60	9	13	12	13	133
Outside.....	2	.....	4	.....	.....	1	1	8
Totals.....	6	22	64	9	13	13	14	141

NON-FATAL ACCIDENTS.

	Sunday.	Monday.	Tuesday.	Wednes- day.	Thurs- day.	Friday.	Saturday	Total.
Inside.....	5	31	30	24	23	27	24	164
Outside.....	.....	.....	2	2	5	1	1	12
Totals.....	5	31	32	27	28	28	25	176

SUMMARY, FATAL AND NON-FATAL ACCIDENTS.

	Sunday.	Monday.	Tuesday.	Wednes- day.	Thurs- day.	Friday.	Saturday	Total.
Inside.....	9	53	90	33	36	39	37	297
Outside.....	2	.....	6	3	5	2	2	20
Totals.....	11	53	96	36	41	41	39	317

1899-1900.

Nationalities.	Fatal.	Non-fatal.
American	72	93
Negro	48	51
Pole	3	3
Hungarian	3	7
Irish	1	
Italian	5	5
German	2	1
Slav	3	
English	1	1
Austrian	1	
Lithuanian	1	
Australian	1	
Welsh		2
Belgian		1
Unknown		12
Totals	141	176

Ages of Persons Killed or Injured.

1899-1900.

	Fatal.	Non-fatal.
14 years or younger	5	5
15 years	1	2
16 years	2	3
17 years	3	5
18 years	3	2
19 years	6	9
20 years	12	5
20 to 25 years	37	39
25 to 30 years	28	32
30 to 35 years	10	18
35 to 40 years	13	21
40 to 45 years	5	7
45 to 50 years	3	5
50 to 55 years		2
55 to 60 years		2
60 to 65 years and above	3	
Unknown	10	19
Totals	141	176

Years of Experience.

1899-1900.

	Fatal.	Non-fatal.
3 months or less.	11	30
3 to 6 months.	6	11
1 year.	5	13
2 years.	7	5
3 years.	8	11
4 years.	6	6
5 years.	5	8
6 years.	3	4
7 years.	1	1
8 years.		2
9 years.	1	1
10 years.	3	6
15 years.	6	14
20 years.	2	3
25 years.	1	
30 years.	1	
Several.	11	14
Many.	5	8
Unknown.	59	39
Totals.	<hr/> 141	<hr/> 176

Fatal Accidents for the Year Ending June 30, 1900.

No	County.	Name of Mine.	Name of Person Killed.	Date of Injury.	Date of Death.	Nationality.	Length of Experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total dependants.	Insurance.	How Killed.	Inquest.	See Page.
1	Barbour	Junior	Loyd Benneth	Nov. 19 '99	Nov. 19 '99	American.	2 years.	19	Miner.						Fall of slate.	No.	1
2	"	Berry's No. 1	J. M. Barnes	Apr. 27 '00	Apr. 27 '00	Colored.	7 years.	24	"						Premature blast.	"	137
3	Hancock	Marquet	John N. Paves	Dec. 11 '99	Dec. 11 '99	American.	sev. yrs.	23	"						Fall of roof.	"	2
4	Harrison	Glen Falls	R. N. Young	July 6 '99	July 6 '99	American.	3 or 4 yrs.	22	"						Fall of slate.	"	3
5	"	Glen Falls	C. L. Robertson	Nov. 18 '99	Nov. 18 '99	American.	3 years.	22	"						Fall of slate.	"	7
6	"	Briar Hill No. 3	Henry M. Shears	Dec. 11 '99	Dec. 11 '99	American.	1 day.	33	Trackman.	Yes	Yes	1	2	No.	Fall of slate.	"	8
7	"	Briar Hill No. 3	Salvador Levot	June 6 '00	June 6 '00	Italian.	3 days.	20	Miner.	M.	Yes	No.	1	No.	Mine car—inside	"	163
8	Marion	Highland	E. Bowers	Sept. 5 '99	Sept. 5 '99	American.		20	"						Powder explos'n.	"	9
9	"	Highland	R. C. Hardesty	Sept. 5 '99	Sept. 5 '99	American.		19	"		Yes	2	3		"	"	10
10	"	Highland	Fred Hamilton	Sept. 10 '99	Sept. 10 '99	American.	15 yrs.	30	Trackman.	M	Yes	1	2		Gas explosion.	"	12
11	"	Gaston	Chas. M. Yates	Oct. 11 '99	Oct. 11 '99	Italian.	2 wks.	35	Miner.	M	Yes	Yes	1		Fall of coal.	"	13
12	"	Hutchinson	Samuel Gentile	Oct. 16 '99	Oct. 16 '99	American.	6 yrs.	28	"	M				No.	Fall of slate	"	19
13	"	Chiefton	Lee Hannan	Oct. 16 '99	Oct. 16 '99	American.	5 yrs.	23	Grip car rid'r	M	Yes	No.	1	No.	Mine cars—inside	"	21
14	"	New England.	George Wilson	Nov. 30 '99	Nov. 30 '99	American.	10 yrs.	26	Boss driver	M				No.	Fall of slate.	"	22
15	"	King	Samuel Hall	Dec. 29 '99	Dec. 29 '99	American.		22	Miner.	M	Yes	2	3	No.	Fall of coal.	"	23
16	"	Highland	Joe Franklin	Jan. 8 '00	Jan. 8 '00	Slovak	3 yrs.	29	Car trimmer.	M	Yes	1	2	No.	Fall of slate.	"	138
17	"	New England.	Sam Ollivia	Mar. 11 '00	Mar. 11 '00	Italian.	2 wks.	28	Miner.	M	Yes	1	2	No.	"	"	147
18	"	Montana	Andy Duniyon	Apr. 2 '00	Apr. 3 '00	Slovak	4 mos.	21	"	M					"	"	139
19	"	Chiefton	David Edwards	Apr. 16 '00	Apr. 16 '00	Colored.	5 days.	17	"	M					"	"	141
20	"	Montana	John Zubric, Jr.	Apr. 30 '00	Apr. 30 '00	Hungarian	30 yrs.	47	"	M	Yes	1	2	No.	Gas explosion.	"	24
21	Ohio	Elm Grove	Frank Martin	Oct. 9 '99	Oct. 9 '99	Negro.	30 yrs.	33	"	M	Yes	3	4	No.	Fall of coal.	"	26
22	"	Tunnelton	Elves G. Myers	July 27 '99	July 27 '99	American.	2 yrs.	33	"	M				\$200	El' troc'ed, i' side	"	27
23	Preston	Simpson	Jas. R. Springston	Aug. 2 '99	Aug. 2 '99	American.	3 yrs.	30	Driver.	M	Yes				Fell on pick	"	28
24	Taylor	Thomas Shaft.	Charles Graves	Aug. 14 '99	Aug. 14 '99	Negro.	5 yrs.	22	"	M					Fell on coal.	"	30
25	Tucker	Thomas Shaft.	John "ebosky	Oct. 16 '99	Oct. 16 '99	Polander.	9 mos.	36	Miner.	M					Fell on coal.	"	31
26	"	Coketon No. 3	John Morack	Nov. 3 '99	Nov. 3 '99	Austrian.	18 mos.	35	"	M					Fell on coal.	"	32
27	"	Thomas Shaft.	John Goeltz	Feb. 11 '00	Feb. 11 '00	Polish.	5 yrs.	30	"	M					Fell on coal.	"	33
28	"	Coketon No. 3	Mike Spinoga	Mar. 3 '00	Mar. 3 '00	Lithuan.	9 yrs.	30	"	M					Fell on coal.	"	34
29	"	Thomas Drift	Joseph Waucks	Mar. 26 '00	Mar. 26 '00	Australian.	4 yrs.	40	"	M					Fell on coal.	"	35
30	"	Coketon No. 3	Frank Lamont	May 3 '00	May 3 '00	Italian.	4 yrs.	23	Driver.	M					Fell on coal.	"	142
31	"	Douglas No. 3	Tony Tolsh	May 3 '00	May 3 '00	American.	3 yrs.	17	"	M					Fell on coal.	"	143
32	"	Douglas No. 3	Wm. Davison	May 29 '00	May 29 '00	English.	3 yrs.	30	"	M	No	Yes	1	\$100	Fall of slate	"	144
33	"	Douglas No. 1	Fredrick Khoff	May 29 '00	May 29 '00	English.	3 yrs.	30	"	M				\$100	"	"	146
34	Kanawha	Belmont	Eng'ne Williams	Jan. 22 '00	Jan. 22 '00	American.	15 yrs.	30	Night f'm'n	M				\$200	Electric loco.	"	168
35	"	Riverside	James Tugle	Feb. 14 '00	Feb. 14 '00	American.	2 yrs.	67	Miner.	M	Yes	3gn	6		Mine cars—inside	"	38
36	"	Spring Fork	E. (Robt.) Young	May 18 '00	May 18 '00	American.	years.	63	"	M	Yes				Fall of slate.	Yes	156
37	Mason	Hope	John Mullen	Aug. 23 '99	Aug. 23 '99	Irish.	40 yrs.	71	"	M	No.	6	6	on	Mine cars—inside	"	35

Fatal Accidents for the Year Ending June 30, 1900.—Continued.

No.	County.	Name of Mine.	Name of person killed.	Date of injury.	Date of Death.	Nationality.	Length of experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total dependants.	Insurance.	How killed.	Inquest.	See Page
38	Putnam	Plymouth	Daniel Tracy	Aug. 10 '99	Aug. 10 '99	American		13	Trapper						Fall of slate.	No.	33
39	Fayette	Central	Ernest Keffer	Aug. 5 '99	Aug. 5 '99	"	sev'l yrs	19	Assist. trip.						Loaded mine	"	39
40	"	Red Star	Mat Thomas	Aug. 21 '99	Aug. 21 '99	Colored	21	Driver							Gas explosion	"	44
41	"	Central	William Finney	Aug. 21 '99	Aug. 21 '99	"	sev'l yrs	25	"						Mine cars-inside	"	50
42	"	Collins	Sam. Kirk	Aug. 28 '99	Aug. 28 '99	American	3 yrs.	21	Miner						Fall of slate	"	52
43	"	Chard	Chas. F. Harless	Sept. 2 '99	Sept. 2 '99	"	sev'l yrs	38	"	M.	yes.	1	2	no.	"	Yes	51
44	"	Diamond	John Burnside	Sept. 8 '99	Sept. 8 '99	"	16 yrs.	29	"	M.				no.	"	"	57
45	"	No. 3 M. T. D. Co.	George Pryor	Oct. 2 '99	Oct. 2 '99	Negro	40	"	"	M.					Fall of coal	No.	59
46	"	Dunn Loop	James H. Brown	Oct. 10 '99	Oct. 10 '99	American	22	"	"	M.					Loaded mine	"	61
47	"	Rush Run	Peter Feel	Oct. 21 '99	Oct. 21 '99	"	ma'y yrs	38	Miner		yes				cars-outside	"	62
48	"	Red Ash	E. B. O'Holland	Oct. 31 '99	Oct. 31 '99	"	10 yrs.	22	"	M.					Mine cars-inside	"	61
49	"	Collins No. 2	Fielden Hinkle	Oct. 31 '99	Oct. 31 '99	"	10 mos.	45	Roller man	M.	yes	2		\$105	Fall of slate	"	65
50	"	Harvey	Geo. H. Taylor	Nov. 4 '99	Nov. 4 '99	"	4 yrs.	36	Miner	M.					Loaded mine	"	67
51	"	Collins	Chas. Barney	Nov. 16 '99	Nov. 16 '99	Negro	2 mos.	22	"	M.					Fall of slate	"	69
52	"	Stone Cliff	O. C. Kubach	Dec. 31 '99	Dec. 31 '99	German	15	49	Gen. Mgr.	M.	yes	6	7	\$ 50.	Boiler explosion	"	72
53	"	Fayette	John J. Miller	Jan. 23 '00	Jan. 23 '00	Negro	30 days	18	Laborer	S.					Fall of slate	"	76
54	"	Quarrier	Thomas Field	Feb. 12 '00	Feb. 13 '00	"	5 yrs.	30	Miner	S.					"	"	135
55	"	Arbuckle	J. P. Suter	Feb. 27 '00	Feb. 28 '00	American	14 yrs.	33	loco-eng'ne'r	M.	yes	2	3	no.	Steam locootive	"	136
56	"	Beechwood	Lovell Shawver	Mar. 2 '00	Mar. 2 '00	"	14 yrs.	33	Out-de-fire'an	M.	yes	2	3	no.	Loaded R. cars-outside.	"	136
57	"	Red Ash	John Day	Mar. 6 '00	Mar. 6 '00	White	22	"	"						Gas explosion	Yes	176
58	"	"	William Day	Mar. 6 '00	Mar. 6 '00	"	16	"	"						"	"	"
59	"	"	Mathew Quarles	Mar. 6 '00	Mar. 6 '00	Colored	40	40	"	M.	1	4	5		"	"	"
60	"	"	Samuel Jackson	Mar. 6 '00	Mar. 6 '00	"	20	"	"						"	"	"
61	"	"	James Hackey	Mar. 6 '00	Mar. 6 '00	"	28	"	"	M.	1		1		"	"	"
62	"	"	Charles Foutte	Mar. 6 '00	Mar. 6 '00	White	26	"	"						"	"	"
63	"	"	Jas. Washington	Mar. 6 '00	Mar. 6 '00	Colored	32	"	"	M.		3	4		"	"	"
64	"	"	Norella Dewes	Mar. 6 '00	Mar. 7 '00	White	28	"	"	M.	1		1		"	"	"
65	"	"	Simoon Fitch	Mar. 6 '00	Mar. 7 '00	"	25	"	"	M.	1	1	2		"	"	"
66	"	"	Novel C Ramsey	Mar. 6 '00	Mar. 7 '00	White	20	"	"	M.	1	1	1		"	"	"
67	"	"	John Stone	Mar. 6 '00	Mar. 7 '00	Colored	35	"	"	M.	1		1		"	"	"
68	"	"	Edward Hamrick	Mar. 6 '00	Mar. 7 '00	White		"	Trapper						"	"	"
69	"	"	L. E. Dotson	Mar. 6 '00	Mar. 7 '00	"	20	"	"						"	"	"

* Brought up in mines. † None in mines. ‡ All grown.

Fatal Accidents for the year ending June 30, 1900.—Continued.

N. o.	County.	Name of Mine	Name of Person Killed.	Date of Injury.	Date of Death.	National-ity.	Length of experience	Age.	Occupation.	Married or single.	Widow.	Orphans.	Total dependants.	Insurance.	How killed.	Inquest.	See Page.
70	Fayette.....	Red Ash.....	Robert Ball.....	Mar. 6'00	Found.	Colored.....	.....	12 1/2	.....	M.....	1	1	2	.....	Gas explosion.....	Yes	176
71	"	"	Isaac Morris.....	Mar. 6'00	Mar. 7'00	"	.....	12 1/2	.....	M.....	.....	.....	.....	.....	"	"	"
72	"	"	Beverly Agce.....	Mar. 6'00	Mar. 7'00	"	.....	12 1/2	.....	M.....	.....	.....	.....	.....	"	"	"
73	"	"	Smith Franklin.....	Mar. 6'00	Mar. 7'00	"	.....	12 1/2	.....	M.....	.....	.....	.....	.....	"	"	"
74	"	"	Hollister Noel.....	Mar. 6'00	Mar. 7'00	"	.....	12 1/2	.....	M.....	.....	.....	.....	.....	"	"	"
75	"	"	Walter Dennis.....	Mar. 6'00	Mar. 8'00	"	.....	21	.....	M.....	.....	.....	.....	.....	"	"	"
76	"	"	S. P. Chappel.....	Mar. 6'00	Mar. 8'00	White.....	.....	20	.....	M.....	.....	.....	.....	.....	"	"	"
77	"	"	C. C. Stewart.....	Mar. 6'00	Mar. 8'00	White.....	.....	20	.....	M.....	.....	.....	.....	.....	"	"	"
78	"	"	Charles Dayney.....	Mar. 6'00	Mar. 8'00	Colored.....	.....	23	.....	M.....	.....	.....	.....	.....	"	"	"
79	"	"	William Sleds.....	Mar. 6'00	Mar. 9'00	White.....	.....	42	.....	M.....	.....	.....	.....	.....	"	"	"
80	"	"	Graville Holmes.....	Mar. 6'00	Mar. 9'00	White.....	.....	45	.....	M.....	.....	.....	.....	.....	"	"	"
81	"	"	John Clair.....	Mar. 6'00	Mar. 9'00	"	.....	25	.....	M.....	.....	.....	.....	.....	"	"	"
82	"	"	Fred Arnold.....	Mar. 6'00	Mar. 9'00	Colored.....	.....	20	.....	M.....	.....	.....	.....	.....	"	"	"
83	"	"	William Massie.....	Mar. 6'00	Mar. 9'00	White.....	.....	20	.....	M.....	.....	.....	.....	.....	"	"	"
84	"	"	A. J. Pritt.....	Mar. 6'00	Mar. 9'00	White.....	.....	25	.....	M.....	.....	.....	.....	.....	"	"	"
85	"	"	Berry Tucker.....	Mar. 6'00	Mar. 10'00	"	.....	22	.....	M.....	.....	.....	.....	.....	"	"	"
86	"	"	Julius A. Sanner.....	Mar. 6'00	.....	"	.....	20	.....	M.....	.....	.....	.....	.....	"	"	"
87	"	"	Samuel Skuff.....	Mar. 6'00	.....	"	.....	25	.....	M.....	.....	.....	.....	.....	"	"	"
88	"	"	B. B. Long.....	Mar. 6'00	Mar. 10'00	"	.....	40	Fire Boss.	M.....	.....	.....	.....	.....	"	"	"
89	"	"	Ernest Long.....	Mar. 6'00	Mar. 10'00	"	.....	12	Trapper	M.....	.....	.....	.....	.....	"	"	"
90	"	"	Moses Daniel.....	Mar. 6'00	.....	Colored.....	.....	.....	.....	M.....	.....	.....	.....	.....	"	"	"
91	"	"	Carl Downey.....	Mar. 6'00	.....	White.....	.....	20	.....	M.....	.....	.....	.....	.....	"	"	"
92	"	"	William Wood.....	Mar. 6'00	.....	Colored.....	.....	20	.....	M.....	.....	.....	.....	.....	"	"	"
93	"	"	John L. Word.....	Mar. 6'00	.....	"	.....	20	.....	M.....	.....	.....	.....	.....	"	"	"
94	"	"	Arthur Haut.....	Mar. 6'00	.....	"	.....	.....	.....	M.....	.....	.....	.....	.....	"	"	"
95	"	"	Arthur Thaxton.....	Mar. 6'00	.....	White.....	.....	.....	.....	M.....	.....	.....	.....	.....	"	"	"
96	"	"	Albert Collins.....	Mar. 6'00	.....	"	.....	.....	Trapper	M.....	.....	.....	.....	.....	"	"	"
97	"	"	Edward Harvey.....	Mar. 6'00	.....	"	.....	.....	.....	M.....	.....	.....	.....	.....	"	"	"
98	"	"	Wm. Hamrick.....	Mar. 6'00	.....	"	.....	.....	.....	M.....	.....	.....	.....	.....	"	"	"
99	"	"	Thomas Long.....	Mar. 6'00	.....	"	.....	.....	Trapper	M.....	.....	.....	.....	.....	"	"	"
100	"	"	James Long.....	Mar. 6'00	.....	"	.....	.....	Trapper	M.....	.....	.....	.....	.....	"	"	"
101	"	"	Charles Perfader.....	Mar. 6'00	Mar. 19'00	"	.....	.....	.....	M.....	.....	.....	.....	.....	"	"	"
102	"	"	Thos. L. Johnson.....	Mar. 6'00	Mar. 23'00	Colored.....	.....	16	Trapper.....	M.....	.....	.....	.....	.....	"	"	"
103	"	"	Orsent Gas No. 2.....	Mar. 31'00	Apr. 2'00	Afro-Am.....	19 yrs.	46	Miner.....	M.....	.....	.....	.....	.....	Fall of rock sl'te	No. 1	150
104	"	"	Edg wat r No 2.....	May 18'00	May 18'00	Colored.....	.....	14	Miner.....	M.....	.....	.....	.....	.....	Powder expl's'n	"	161
105	"	"	Macdonald.....	May 29'00	May 29'00	American.....	12 1/2	25	Trip rider.....	M.....	Yes	.....	.....	1 1/2	Crushed between gear & post inside	"	173

Fatal Accidents for the Year Ending June 30, 1900.—Continued.

No.	County.	Name of Mine.	Name of Person Killed.	Date of Injury.	Date of Death.	Nationality.	Length of Experience.	Age.	Occupation.	Married or Single.	Widow.	Orphans.	Total dependants.	Insurance.	How killed.	Inquest.	See Page.
106	Mingo	Thacker	Henry Mitchell.	Sept. 13 '99	Sept. 13 '99	American.	10 yrs	45	Timberman.	M.	No.	9	No.	No.	Fall of slate.	No.	75
107	"	"	Jas. A. Glass	Oct. 6 '99	Oct. 13 '99	Colored.	"	30	Miner.	M.	No.	"	No.	"	Fall of coal.	"	80
108	Mellowell	Algoma	John Price.	July 1 '99	July 1 '99	Afro-Am.	"	22	Laborer.	M.	No.	"	No.	"	Fall of slate.	"	81
109	"	Bottom Creek	Will Ward.	July 18 '99	July 18 '99	Colored.	5 or 6 yrs	30	Miner.	M.	No.	2	No.	"	"	"	82
110	"	Indian Ridge	Geo R. Hall.	July 28 '99	July 28 '99	American	1 yr.	19	Miner.	M.	Yes	12	No.	"	"	"	83
111	"	Algoma.	Wm. Slack.	Aug. 15 '99	Aug. 15 '99	Afro-Am.	1 wk.	29	Laborer.	M.	No.	"	No.	"	"	"	84
112	"	Gilliam.	Jes F. Richards	Aug. 21 '99	Aug. 21 '99	American.	1 mo.	27	Miner.	M.	No.	"	No.	"	"	"	85
113	"	Norfolk.	Henry Bazorta.	Sept. 2 '99	Sept. 2 '99	Afro-Am.	sev 1 yrs	25	Driver.	M.	Yes	1	50	50	Mine cars-inside	Yes	86
114	"	Elkhorn.	Robert King.	Sept. 22 '99	Sept. 22 '99	American.	2 yrs.	27	Miner.	M.	No.	"	No.	"	Mine cars-inside	Yes	89
115	"	Gilliam.	Jessie Glimms.	Sept. 25 '99	Sept. 25 '99	Colored.	1 mo.	19	"	"	"	"	No.	"	Fall of coal.	Yes	95
116	"	Algoma.	Ed. Prindle.	Sept. 25 '99	Sept. 25 '99	Colored.	1 mo.	19	"	"	"	"	No.	"	Fall of slate.	No.	102
117	"	Peerless	A'ty Koperlarage	Oct. 10 '99	Oct. 10 '99	Pole.	14 yrs.	35	"	"	"	"	"	"	Fall of slate.	"	103
118	"	Gilliam	Ernest Durling.	Oct. 19 '99	Oct. 19 '99	German.	5 yrs.	35	"	"	"	"	"	"	Fall of coal.	"	110
119	"	Purkey Gap.	William Brown.	Nov. 21 '99	Nov. 21 '99	Afro-Am.	5 mo.	17	Laborer.	M.	Yes	6	"	"	Fall of coal.	"	111
120	"	Elk Ridge.	J. M. Rudisill.	Dec. 8 '99	Dec. 8 '99	American.	6 wks	38	Miner.	M.	Yes	"	"	"	Coke oven loco.	"	112
121	"	Gilliam	W. D. Hunt.	Dec. 9 '99	Dec. 9 '99	American.	2 yrs.	30	Brakeman.	M.	No.	"	"	"	Fall of slate.	"	113
122	"	Elkhorn.	Samuel Clemens	Dec. 15 '99	Dec. 22 '99	American.	6 yrs.	29	Miner.	M.	No.	"	"	"	Fall of slate.	"	114
123	"	Ashland.	Elbert Holt.	Jan. 11 '00	Jan. 11 '00	American.	2 yrs.	29	Miner.	M.	No.	"	"	"	Fall of slate.	"	115
124	"	Norfolk	Riley Craig.	Jan. 21 '00	Jan. 23 '00	Colored.	for yrs.	42	Laborer.	M.	Yes	"	"	"	Mine cars-o'side	"	117
125	"	Bottom Creek.	Ludwig Sawkac.	Feb. 19 '00	Feb. 19 '00	slav.	1 yr.	23	"	"	"	"	"	"	Gas explosion.	"	118
126	"	Purkey Gap.	Thomas Perdue.	Feb. 21 '00	Feb. 21 '00	American.	sev 1 yrs	27	"	"	Yes	"	"	"	Fall of slate.	"	125
127	"	Lynchburg.	Sam'l J. Henry.	Mar. 21 '00	Mar. 21 '00	American.	sev 1 yrs	27	"	"	Yes	2	3	650	"	"	131
128	"	Crozer No. 1.	Frank Yarnum.	Mar. 21 '00	Mar. 21 '00	Hungarian	4 yrs	30	"	"	Yes	"	"	"	"	"	134
129	"	Bottom Creek.	W. H. Ballard.	Apr. 16 '00	Apr. 16 '00	American	5 yrs	21	Laborer.	M.	Yes	"	"	"	Fall of coal.	"	149
130	"	Algoma.	Wm. Leftwich.	Apr. 21 '00	Apr. 21 '00	Afro-Am.	3 yrs.	18	Laborer.	M.	Yes	"	"	"	Fall of slate.	"	150
131	"	Indian Ridge.	Berry Mitchell.	Apr. 21 '00	Apr. 21 '00	Afro-Am.	2 yrs.	21	Miner.	M.	No.	"	"	"	Fall of slate.	"	152
132	"	Shamokin.	Thomas Powell.	May 4 '00	May 4 '00	American.	2 yrs.	27	Miner.	M.	No.	"	"	"	Powder explosion	"	157
133	"	Lynchburg.	John Walker.	May 15 '00	May 15 '00	Colored.	1 yr.	24	Laborer.	M.	No.	"	"	"	Mine cars-o'side	Yes	155
134	"	Gilliam	Geo. W. Wells.	May 15 '00	May 15 '00	American.	4 yrs.	39	Miner.	M.	Yes	9	10	100	Fall of slate.	No.	158
135	"	"	J. Graves Craft.	May 21 '00	May 24 '00	American.	10 yrs.	38	Miner.	M.	Yes	2	3	No.	"	"	169
136	"	Bottom Creek.	Willie Craig.	June 4 '00	June 4 '00	Colored.	1 yr.	14	Door-tender.	M.	Yes	"	"	"	"	"	170
137	"	Algoma.	Enoch Martin.	June 26 '00	June 26 '00	Hungarian	10 yrs.	34	Miner.	M.	Yes	"	"	"	"	"	171
138	Mercer	Mill Creek	Walter Minnis.	Sept. 30 '99	Sept. 30 '99	American	21 yrs.	39	Miner.	M.	No.	"	"	"	R. R cars-o'side	"	127
139	"	Goodwell	Thomas Clark.	Jan. 25 '00	Feb. 8 '00	American	2 mos.	21	Laborer.	M.	No.	"	"	"	Fall of slate.	"	128
140	"	Caswell	Lewis Newman.	Feb. 20 '00	Feb. 20 '00	American.	1 mo.	21	Miner.	M.	No.	"	"	"	Fall of coal.	"	129
141	"	Buckeye.	Harry White.	Apr. 25 '00	Apr. 25 '00	Afro-Am.	1 mo.	21	Miner.	M.	No.	"	"	"	Fall of slate.	"	154

* 12 or 14 yrs. † \$5 per wk. ‡ \$5 per wk. § \$5 per wk.

Non-Fatal Accidents for the Year Ending June 30, 1900.

County.	Name of Mine.	Name of Person Injured.	Date of Accident.	Nationality.	Length of experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.	Page.
1 Harrison	Despard.....	Geo. McShipley..	Mar. 29, '00	American..	3 or 4 yrs	36	Miner	Fall of coal.....	Collar bone broken—head cut.....	334
2 "	Melrose.	Owen McAtee.....	May 28, '00	"	5 yrs.....	23	Driver.....	Car jumped track and caught him.....	Ribs broken and hurt internally.....	383
3 Marion.....	New England.....	Osey Richards.....	Nov. 29, '99	"	3 mos.....	19	Miner	Fall of slate.....	Leg cut and broken.....	220
4 "	Chifton.....	Scott Channell.....	Dec. 11, '99	"	2 yrs.....	40	Mine m'ch man.....	Mine machine.....	Leg cut off.....	221
5 "	New England.....	Albert Jenkins.....	Jan. 1, '00	"	1 yr.....	15	Trapper.....	Cars.....	Leg broken.....	222
6 "	Anderson.....	James Deems.....	Jan. 9, '00	"	3 mos.....	23	Driver.....	Mine cars, inside.....	Hips and back twisted and bruised.....	223
7 "	New England.....	Luther Molissee.....	Feb. 16, '00	"	4 day s.....	21	Mule driver.....	Cars	Hand and arm mangled and cut.....	224
8 "	"	Lloyd Cox.....	Feb. 19, '00	"	30 days.....	19	Mule driver.....	Mine cars, inside.....	Head cut and leg mangled.....	225
9 "	"	Tony Sprague.....	Mar. 11, '00	Italian.....	2 mos.....	13	Miner.....	Fall of slate.....	Cal of leg torn, right leg bruised.....	335
10 "	"	Rinaldo Sprague.....	Mar. 14, '00	Italian.....	6 mos.....	38	Miner	Fall of slate.....	Loss of arm. Head and body hurt.....	336
11 "	"	Wm. Mahaffey	Mar. 24, '00	American..	sev. yrs.....	32	Mine m'ch run'r.....	Fall of slate.....	Ankle broken. Legs and body hurt.....	337
12 "	Chifton.....	Wm. Marple.....	Apr. 12, '00	"	15½ yrs	50	Miner	Fall of slate.....	Head, hips and legs bruised. Back sprained.....	338
13 Mineral.....	Windom.....	Geo. Gordon	May 8, '00	"	"	"	"	Fall of slate.....	Knee cap injured.....	384
14 "	"	Wm. Beard	May 8, '00	"	"	"	"	Fall of slate.....	Leg broken above and below knee.....	385
15 "	"	J. Hotchkis (boy)	May 8, '00	"	"	"	"	Fall of slate.....	Bone broken above ankle.....	886
16 Preston.....	Tunnelton.....	Carl Hysell.....	Nov. 16, '99	"	8 yrs.....	26	Miner.....	Fall of coal.....	Head cut and leg hurt.....	226
17 "	Tunnelton No. 1.....	Julius Wilson.....	Apr. 25, '00	"	3 yrs.....	25	Miner.....	Fall of coal.....	Foot Mashed.....	339
18 "	Newburg.....	Thos. Ritson.....	May 17, '00	English.....	3 mos.....	"	Superintendent.....	Gas explosion.....	Face and hands bruised.....	382
19 Taylor.....	Flemington.....	Andrew Hutson.....	Nov. 24, '99	American..	12 yrs.....	41	Miner.....	Fall of coal.....	Head cut and back sprained.....	227
20 "	"	Edward E. Beall.....	Feb. 6, '00	"	20 yrs.....	55	Miner.....	Fall of coal.....	Leg broken, right side bruised.....	228
21 "	"	Clint. Thompson.....	Feb. 8, '00	Afro-Am	2 yrs.....	18	Miner	Fall of slate.....	Dislocation of left hip joint.....	229
22 "	"	Civitis Norris.....	Mar. 15, '00	American..	Life.....	"	Miner	Fall of slate.....	Head, neck & eyes cut.....	340

Non-Fatal Accidents for the Year Ending June 30, 1900.—Continued.

No.	County.	Name of Mine.	Name of person injured.	Date of Accident.	Nationality.	Length of experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.	Page.
23	Tucker.....	Coketon No. 3 coke-yard.....	Tony Polage.....	July 11, '99	Italian.....	4 yrs.....	30	Coke-drawer.....	Cars.....	Leg lacerated.....	230
24	"	Thomas Shaft.....	John Bulock.....	Aug. 17, '99	Pole.....	2 yrs.....	23	Driver.....	Kicked by mule.....	Left eye out and nose broken.....	231
25	"	Coketon No. 3.....	D. W. Brashears.....	Aug. 19, '99	American.....	35	35	Miner.....	Fall of coal.....	Back dislocated.....	232
26	"	Thomas Shaft.....	Floriam Drop.....	Oct. 11, '99	Hungarian.....	.....	30	"	Fall of slate.....	Leg broken and body bruised.....	233
27	"	Coketon No. 3.....	Thomas Moran.....	Dec. 7, '99	American.....	.....	17	Laborer.....	car lift mach'y on tippie	Arm mashed and broken	234
28	"	Coketon No. 3.....	Pognal Watroe.....	Jan. 19, '00	Italian.....	5 yrs.....	40	Miner.....	Fall of slate.....	Jaw broken.....	235
29	"	Coketon No. 2.....	Joe Bolton.....	Jan. 30, '00	Hungarian.....	10 yrs.....	40	"	"	Fingers mashed.....	236
30	"	Thomas Shaft.....	John Pittross.....	Feb. 11, '00	Pole.....	2 yrs.....	24	"	Fall of coal.....	Left leg broken and hand mashed.....	237
31	"	Douglas No. 1.....	William Yates.....	May 29, '00	American.....	5 yrs.....	19	Driver.....	Fall of slate.....	Back and legs hurt.....	387
32	Randolph.....	Leiter.....	J. M. Strickler.....	Apr. 30, '00	"	sev'l yrs	14 days	Miner.....	Fall of slate.....	Back and legs hurt.....	341
33	Kauawha.....	Belmont.....	Jessie Moss.....	July 11, '99	"	sev'l yrs	38	brunrunner.....	Loading R. R. steel.....	Fingers mashed.....	238
34	"	Matu opening.....	"	"	"	"	"	"	"	"	"
35	"	Coalburg.....	A. M. Lively.....	July 14, '99	"	12 yrs.....	25	Driver.....	Fall of slate.....	Left thumb cut off.....	239
36	"	Ronda.....	Jas. W. Crawford.....	July 28, '99	"	in y yrs	36	Miner.....	Mine car-inside.....	Mashed fingers.....	240
37	"	Ronda.....	Lewis Farley.....	Aug. 7, '99	"	"	"	Driver.....	Mule kicked coal in eye.....	Bruised eye.....	241
38	"	Ronda.....	Jacob Spriegel.....	Aug. 15, '99	"	"	55	Trackman.....	Fall of slate.....	Head and body bruised and cut.....	242
39	"	Belmont.....	Albert Mullins.....	Aug. 30, '99	"	sev'l yrs	19	Loading coal.....	"	Squeezed in hips.....	243
40	"	Lens Creek.....	Daniel D. Harless.....	Sept. 21, '99	"	1 yr.....	27	Miner.....	"	Left leg broken.....	244
41	"	Keystone.....	E. D. Deporter.....	Oct. 4, '99	Belgian.....	17 yrs.....	29	Tracklayer.....	Fall of coal.....	Leg broken.....	245
42	"	Belmont.....	George Fauber.....	Oct. 13, '99	American.....	sev'l yrs	45	Miner.....	Fall of slate.....	Right arm crushed, little finger, right hand cut off and otherwise injured.....	246
43	"	Acme.....	W. O. Sheppard.....	Oct. 28, '99	"	15 yrs.....	36	Coal-loader.....	"	Leg bruised & head cut.....	247
44	"	Chesapeake.....	Thos. Michell.....	Nov. 23, '99	Afro-Am.....	5 yrs.....	40	Miner.....	"	Head and hip hurt.....	248
45	"	Big Mountain.....	Richard Thomas.....	Jan. 29, '00	American.....	20 yrs.....	40	"	"	Shoulder bruised.....	368
46	"	Big Mountain.....	Ed. Murphy.....	Jan. 29, '00	"	20 yrs.....	40	"	"	Ankle crushed.....	369
47	"	New Bank.....	Bump. Thomas.....	Mar. 26, '00	"	15 yrs.....	27	"	"	Leg fractured.....	328
48	"	Campbells Crk.....	Walter Krantz.....	Apr. 13, '00	"	3 yrs.....	19	"	"	Scalp wound-lower dorsal vertebra fractured.....	367
49	Mason.....	New Haveu.....	W. E. Holsteine.....	June 27, '00	"	"	"	"	Fall of coal.....	Lost sight of eye.....	392
50	Punaham.....	Plymouth.....	John Elliott.....	Mar. 30, '00	"	5 yrs.....	19	"	"	Bone broken below knee.....	342
			James Foster.....	Dec. 13, '99	"	"	"	"	Fall of slate.....	Left hand cut off.....	249

No.	County.	Name of Mine.	Name of Person Injured.	Date of Accident.	Nationality.	Length of experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.	Page.
51	Putnam	Florence	Clinton Osborn	Apr. 10, '00	American	5 yrs.	22	Driver	Run over by mine car.	Leg broken.	370
52	Putnam	Florence	Richard Riser	Apr. 16, '00	"	in mnyrs	17	Trapper	Wrlg with an hr trap	Arm broken.	371
53	Fayette	Rush Run	Peter Fecl	July 12, '99	"	"	38	Miner	Fall of slate.	Right leg broken.	370
54	"	Rush Run	Thomas Roach	July 15, '99	German	"	19	"	Electric motor, inside.	Leg broken.	351
55	"	North Side	Isreal Early	July 27, '99	Negro	No o y s	45	"	Fall of slate.	Right leg fractured.	352
56	"	Fayette	Op Eads	Aug. 7, '99	American	3 years	27	Miner	Fall of roof.	Pack and head hurt.	353
57	"	Nuttallburg	Lerry Taylor	Aug. 7, '99	Afro-Am	6 years	27	Driver	Caught in mule's traces	Leg broken.	354
58	"	Star	Lewis Burks	Aug. 21, '99	Colored	8 m y s	35	Miner	Gas explosion.	Burned on face & back.	355
59	"	Star	Isaac Burks	Aug. 21, '99	"	8 m y s	35	"	Gas explosion.	Not seriously burned.	355
60	"	South Capert'n	Sammel Walker	Aug. 24, '99	American	13 yrs	25	Driver	Mine cars and mule.	Right leg broken.	356
61	"	Cunard	Geo. Freeman	Sept. 2, '99	"	"	21	Miner	Fall of slate.	Jaw bone broken.	356
62	"	Longacre	Wm. A. Phillips	Sept. 13, '99	"	"	"	Foreman	Repair'g friction clutch	Broken arm.	357
63	"	Vulcan	Chas. Bean	Oct. 9, '99	"	"	"	Driver	Mine car, inside.	Left arm broken.	359
64	"	Crescent No. 5	W. H. Cook	Oct. 21, '99	American	12 yrs.	39	Miner	Fall of coal.	Leg broken.	329
65	"	Alaska	Chas. Garrett	Oct. 25, '99	"	15 yrs.	35	"	Mine cars.	Leg broken.	360
66	"	Stone Cliff	Rose Fisher	Oct. 27, '99	Afro Am	1 yr.	17	Mine laborer	Fall of slate.	Leg broken, head bru'sd	361
67	"	Thurmond	A. Humphrcys	Nov. 3, '99	American	sev. yrs.	25	Miner	"	Leg broken, ankle spr'nd	362
68	"	Rush Run	George Estep	Jan. 8, '00	"	sev. yrs.	25	"	"	Hip joint dislocated.	364
69	"	Brooklyn	Dallas F. Moran	Feb. 15, '00	White	6 1/2 yrs.	19	"	Mine car, incline.	Loss of foot.	365
70	"	St. Clair No. 1	John Kilburn	Feb. 15, '00	American	15 yrs.	15	"	Fall of slate.	Head cut & leg broken.	371
71	"	St. Clair	Thomas Loyd	Feb. 21, '00	"	20 yrs.	50	Mine boss.	Cars wrecked by carelessness of motor man.	Arm broken & face cut.	375
72	"	St. Clair	John Banks	Feb. 21, '00	Negro	7 yrs.	22	Motor man	Cars wrecked by carelessness of motor man.	Cut on knee and leg broken.	376
73	"	Arbuckle	J. Ed. Rippectoe	Feb. 23, '00	American	1 yrs.	19	Miner	Shot exploded.	Partial paralysis of right side.	330
74	"	Arbuckle	N. G. Richmond	Feb. 27, '00	"	"	"	Trackman	Narrow gauge R. R.	Foot mashed.	331
75	"	Crescent No. 5	W. R. Johnson	Feb. 28, '00	"	1 yr.	14	Miner's assistant	Fall of slate.	Thigh broken.	332
76	"	Stone Cliff	A. L. Banks	Mar. 6, '00	Afro-Am	3 or 4 yrs	23	Miner	Gas.	Right leg broken.	333
77	"	Red Ash	Wm. Robinson	Mar. 6, '00	Colored	"	"	"	Car explosion.	"	334
78	"	Red Ash	Elenczer Jones	Mar. 6, '00	"	"	"	"	"	"	335
79	"	Red Ash	Joseph Elliott	Mar. 6, '00	"	"	"	"	"	"	336
80	"	Longacre	Rorth Butterick	Apr. 19, '00	"	"	16	Helper	Fell in front of a car coming down plane.	Ankle mashed.	377
81	"	Vulcan	Winifrede Riffe	Apr. 27, '00	American	"	17	Back hand	Fall of top coal.	Legs injured.	378
82	"	Edgew'rt No. 2	Owen Edwards	May 16, '00	Welsh	20 yrs.	35	Shot fire.	Charge of powder exploded.	Face and hands burned	379

* Since a boy.

Non-Fatal Accidents for the Year Ending June 30, 1900.—Continued.

No.	County.	Name of Mine.	Name of person injured.	Date of Accident.	Nationality.	Length of experience.	Occupation.	Nature of Accident.	Injuries sustained.	Page.
83	Fayette	Sun	Henry Morris	May 21, '00	Negro	10 yrs.	Miner	Gas explosion	Burned	380
84	"	Sun	Doe Goff	May 21, '00	Negro	15 yrs.	"	Gas explosion	Burned	381
85	"	Edgewater	Sam. Arthur	June 2, '00	"	22 yrs.	Driver	Fall of slate	"	387
86	"	No. 2 (Gau. Mt)	Edward Hobson	June 24, '00	Afro-Am	4½ yrs.	Miner	Fell under car	Ears cut & jaw fractured	388
87	"	No. 2 (Gau. Mt)	William Mace	June 24, '00	American	18 mos.	"	Fall of top coal	Back broken	389
88	Mingo	Logan	Jake Heaberline	July 7, '99	"	"	"	Machine	Left hip, thigh, leg and foot injured	266
89	"	"	Floyd E. Hatfield	Dec. 27, '99	"	4 yrs.	Car-loader	Mine car-outside	Loss of fingers on right hand	267
90	"	"	G. G. Fugith	Jan. 11, '00	"	"	"	Mule	Eye hurt	268
91	"	Maritime	C. W. Burke	Jan. 22, '00	"	25 yrs.	Foreman	Fall of slate	Head and back bruised	269
92	"	Logan	Jacob Gulleth	Apr. 6, '00	Afro-Am	41 yrs.	"	"	Left ankle fractured	343
93	"	Red Jacket	John Stevens	Apr. 14, '00	American	"	"	Fall of slate	Contusion in region of right kidney	344
94	"	Maritime	Lon Ferguson	May 11, '00	"	5 yrs.	Miner	"	Ribs broken	366
95	"	Logan	Jonas England	June 27, '00	"	30	"	Fall of slate	Contusion of left ankle	363
96	McDowell	Algoma	Stephen Clemens	July 7, '99	Afro-Am	6 yrs.	"	Fall of coal	Internal injury about hip	270
97	"	Bottom Creek	Joe Lucas	July 10, '99	"	1 yr.	"	Fall of coal	Collar bone brok'n Chest and head bruised	271
98	"	Elk Ridge	J. J. Bramfield	July 13, '99	American	3 yrs.	"	Fall of slate	Bruised on shoulder	272
99	"	McDowell	John Vanawitshi	July 17, '99	Hungarian	29	General work at oven	Fall of slate	Foot mashed	273
100	"	McDowell	Luster Dudley	July 20, '99	Negro	"	"	Mine car-coke oven	er hurt	274
101	"	Norfolk	Rodney Gentry	July 24, '99	American	6 mos.	Miner	Fall of coal	Thumb and first finger hurt	275
102	"	"	Sam. Tawney	July 25, '99	"	30	"	Mine car inside	Left ankle sprained. Left shoulder & chest hurt	276
103	"	"	R. N. White	July 25, '99	"	2 mos.	"	Fall of slate	Contusion of right shoulder and chest	277
104	"	Peerless	Chas. Hunter	Aug. 8, '99	Negro	6 wks.	Trapper	Mine-cars	Two ribs fractured	285
105	"	Lick Branch	Dan. H. Smith	Aug. 11, '99	American	sev'l yrs	Miner	Fall of coal	Loss of left hand	286
106	"	McDowell	Sam. Lafrado	Aug. 19, '99	Italian	32	"	Fall of slate	Rupture of neck of bladder	279
107	"	Elk Ridge	Wm. Gray	Aug. 24, '99	Negro	no. yrs.	"	Fall of coal	Hip crushed	280
108	"	McDowell	Jack Kater	Aug. 29, '99	Negro	sev'l yrs	Track hand	Mine-car	Leg fractured	281
						18			Ankle sprained	282

Non-Fatal Accidents for the Year Ending June 30, 1900.—Continued.

No.	County.	Name of Mine.	Name of Person Injured.	Date of Accident.	Nationality.	Length of experience.	Age.	Occupation.	Nature of Accident.	Injuries sustained.	Page.
109	McDowell	Peerless.	W. Davis.	Sept. 6, '99	Negro	3 days.	21	Driver.	Fall of slate.	Back sprained.	283
110	McDowell	Peerless.	F. C. Franklin.	Sept. 6, '99	Negro	3 mos.	13	Trapper.	" " "	Fingers of right hand mashed.	284
111	McDowell	Peerless.	A. Franklin.	Sept. 8, '99	"	14 years.	35	Miner.	" coal.	Chest and legs bruised.	278
112	McDowell	Norfolk	Steve Holaday.	Sept. 9, '99	American.	Several months.	23	M'r & c'l loader.	" slate.	Lost one finger. Another hurt.	286
113	McDowell	Norfolk.	Ed. Schafer.	Sept. 12, '99	Afro-Am.	10 yrs.	35	Mining & l'd'g c	" " "	Left leg fractured.	287
114	McDowell	Norfolk.	J. R. Tawney.	Sept. 15, '99	American.	4 yrs.	20	Machine man.	Mine car inside.	Collar bone fractured—breast bone dislocated.	288
115	McDowell	McDowell.	S. W. Printh.	Oct. 6, '99	American.	7 mos.	35	Miner.	Fall of slate.	Head, left shoulder and hip hurt.	289
116	McDowell	M. Dowell.	Steve Marey.	Oct. 7, '99	Hungarian.	7 mo.	30	"	" coal.	Thumb sprained.	290
117	McDowell	Elkhorn.	Reuben Sparks.	Oct. 9, '99	American.	15 yrs.	58	"	" " "	Stomach bruised.	291
118	McDowell	Crozer No. 1.	Chas. L. Longer.	Oct. 12, '99	"	9 mos.	45	"	" slate.	Right arm fractured and skull crushed.	292
119	McDowell	Crozer No. 2.	Mat Anthony.	Nov. 1, '99	American.	2 mos.	15	Coal loader.	Electric wire.	Both hands burned.	293
120	McDowell	Norfolk.	Wirt Goodloe.	Nov. 6, '99	American.	1 mo.	20	Track layer.	Mine cars.	Left leg fractured.	294
121	McDowell	Crozer No. 1.	Fred Forchimer.	Nov. 27, '99	Hungarian.	2 mos.	38	Miner.	Fall of coal.	Foot bruised.	295
122	McDowell	Crozer No. 1.	David Rhodes.	Nov. 28, '99	Colored.	2 yrs.	"	"	" " "	Back, head and face bruised.	296
123	McDowell	Norfolk.	George Green.	Dec. 8, '99	American.	"	21	"	Mine cars.	Ribs fractured.	297
124	McDowell	Lick Branch.	Wm. Mason.	Dec. 10, '99	Afro-Am.	2 mos.	25	"	Fall of coal.	One bone of fore arm broken.	298
125	McDowell	Crozer No. 1.	Miko Povish.	Dec. 12, '99	Polander.	1 mo.	40	"	" slate.	Clin cut, blood vessel on arm burst.	299
126	McDowell	Elkhorn.	Joe Doss.	Dec. 22, '99	American.	3 yrs.	30	"	" " "	Head cut, feet bruised.	301
127	McDowell	Turkey Gap.	R. K. Johnson.	Dec. 27, '99	Colored.	3 mos.	30	"	" " "	Leg broken.	302
128	McDowell	Keystone.	William Reeto.	Jan. 9, '00	American.	16	Prakeman.	Mine cars.	" " "	Left leg broken.	303
129	McDowell	Crozer No. 1.	Emery Edwards.	Jan. 10, '00	American.	1 mo.	26	Miner.	Fall of coal.	Heel bruised and ankle sprained.	304
130	McDowell	Bottom Creek.	Elias Harviston.	Jan. 11, '00	Colored.	some yrs.	25	Driver.	Mine cars inside.	Two ribs broken.	305
131	McDowell	Gilliam.	Robt. C. Caldwell.	Jan. 17, '00	American.	4 mos.	32	Miner.	Fall of slate.	Four ribs broken, back sprained, other in juries.	306
132	McDowell	Elk Ridge.	Judge Coleman.	Jan. 20, '00	Colored.	3 or 4 yrs.	23	Slate man.	" " "	Loss of left arm.	307
133	McDowell	McDowell.	M. A. Mathews.	Jan. 23, '00	American.	"	35	Laborer.	Slipping of piece coal.	Ankle sprained.	308

Non-Fatal Accidents for the Year Ending June 30, 1900.—Continued.

No.	County.	Name of Mine.	Name of Person Injured.	Date of Accident.	Nationality.	Length of experience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.	Page.
134	McDowell	Greenbrier.....	P. A. Hart.....	Feb. 2, '00	American	15 years	39	Miner.....	Fall of coal.....	Right hip, left shoulder harm, internal injuries.	309
135	"	Crozer No. 2.....	G. H. Glover.....	Feb. 9, '00	African.....	2 mos.	25	Miner.....	" slate.....	Loss of toe.....	312
136	"	Shamokin.....	George Williams.....	Feb. 17, '00	Welsh.....	20 yrs.	29	Driver.....	C'ght bet. mule and ear	Leg broken.....	315
137	"	McDowell.....	Joe Vayna.....	Feb. 19, '00	Hungarian	47 yrs.	47	Miner.....	Fall of coal.....	Right leg fractured.....	310
138	"	Pulaski.....	Red Bailey.....	Feb. 19, '00	Colored	35 yrs.	35	Miner.....	" " " " " "	Both arms and right knee hurt.....	311
139	"	Shawnee.....	Isiah Mullin.....	Feb. 27, '00	African.....	1 yr.....	17	" " " " " "	" slate.....	Right leg broken.....	325
140	"	Rolle.....	George Saunders.....	Mar. 8, '00	Colored	3 wks.	30	Miner.....	" coal.....	Leg broken.....	326
141	"	Turkey Gap.....	Garret Gilbert.....	Mar. 10, '00	Colored	1 mo.	23	Miner.....	" slate.....	Leg broken and cut.....	327
142	"	Shamokin.....	J. E. Feltz.....	Mar. 23, '00	American.	10 yrs.	50	Miner.....	" slate.....	Leg broken.....	316
143	"	Turkey Gap.....	Perkins Miller.....	Mar. 31, '00	Colored	8 yrs.	27	Brakeman.....	Mine cars.....	Loss of leg.....	347
144	"	Norfolk.....	John Burgess.....	Apr. 12, '00	Afro-Am	1½ mos	30	Miner.....	Fall of slate.....	Ankle and head of fibula fractured.....	348
145	"	Elkhorn.....	T. Alexander.....	Apr. 14, '00	Afro-Am	9 yrs.	25	Brakeman.....	Mine cars.....	Breast crushed.....	349
146	"	McDowell.....	J. N. Dunthart.....	Apr. 16, '00	Negro	8 mos.	21	Miner.....	Fall of coal.....	Leg broken.....	350
147	"	Algoma.....	John Parker.....	Apr. 21, '00	Afro Am	3 mos.	20	Laborer.....	" slate.....	Right leg fractured.....	357
148	"	" " " " " "	Riley Keckum.....	Apr. 21, '00	Afro-Am.....	3 mos.	23	Laborer.....	" " " " " "	Arm and head hurt.....	353
149	"	" " " " " "	Wm. L. Joyner.....	Apr. 21, '00	American.	11 yrs.	30	Foreman.....	" " " " " "	Spinal column injured.....	354
150	"	Shamokin.....	E. W. St. Clair.....	Apr. 30, '00	American	12 yrs.	35	Miner.....	" rock.....	Head and shoulder br'sed	356
151	"	Norfolk.....	Joseph Bland.....	May 3, '00	Afro-Am	8 or 9 m	20	Miner.....	" slate.....	Collar bone broken, scalp wound.....	357
152	"	Norfolk.....	J. W. Ruff.....	May 3, '00	American.	10 yrs.	22	Miner.....	" " " " " "	Contusion of back.....	358
153	"	Indian bridge.....	Isaac Hill.....	May 4, '00	Afro-Am.....	10 yrs.	46	Miner.....	Blown out shot.....	Burned.....	359
154	"	Angle.....	Thomas Wiley.....	May 9, '00	American.	6 mos.	21	Miner.....	Fall of slate.....	Scalp bruised.....	361
155	"	Shamokin.....	J. A. Thurman.....	May 14, '00	Colored	6 yrs.	30	Miner.....	Fall of coal and slate.....	Leg broken.....	362
156	"	Keystone.....	Edgar Board.....	May 16, '00	American	1 yr.....	14	Trapper.....	Rock thrown on him	Thigh broken.....	372
157	"	Norfolk.....	Paul Clark.....	June 9, '00	Afro Am	25 yrs.	25	Laborer.....	Fell under ear.....	Back of head and face torn, right shoulder blade bruised.....	388
158	"	Norfolk.....	Jos. Dickerson.....	June 26, '00	Afro-Am.	Few d's	22	Miner.....	Fall of coal and slate.....	Small bone of leg fractured.....	391
159	Meer.	Louisville.....	J. L. Ferguson.....	July 19, '99	American.	2 yrs.	22	Miner.....	Fall of coal.....	Back and left hip br'sed	314
160	"	Louisville.....	Ed Guthrie.....	July 24, '99	Afro-Am	1 yr.....	23	Miner.....	Fall of slate.....	Right hand mashed.....	313
161	"	Coaldale.....	D. J. Harrington.....	Aug. 24, '99	American.	1 yr.....	40	Miner.....	Powder explosion.....	Hands, face and back burned.....	315
162	"	Goodwill.....	Wm. Holland.....	Sept. 5, '99	Negro.....	Sev. yrs	23	Miner.....	Fall of slate.....	Side and ankle bruised.	316

No.	County.	Name of Mine.	Name of person Injured.	Date of Accident	National-ity.	Length of ex-perience.	Age.	Occupation.	Nature of Accident.	Injuries Sustained.	Page.
163	Mercer.....	Goodwill.....	Isaac Young.....	Sept. 7, '99	Negro.....	8 yrs.....	22	Miner.....	Fall of slate.....	Both bones broken below knee.....	317
164	".....	Louisville.....	Joseph Weimer.....	Sept. 28, '99	Hungarian.....	.....	30	".....	" " ".....	Back bruised.....	318
165	".....	".....	C. J. Lyons.....	Oct. 6, '99	Afro-Am.....	10 yrs.....	35	".....	" " ".....	Back, legs, chest, hips, feet and internal injury.....	319
166	".....	".....	C. L. Mast.....	Nov. 8, '99	American.....	3 yrs.....	30	Track man.....	Mine car, inside.....	Back skinned entire length and bruised ..	321
167	".....	".....	Wm. Taylor.....	Dec. 5, '99	American.....	3 yrs.....	15	Driver.....	" " ".....	Head cut.....	320
168	".....	Mill Creek.....	John Coles.....	Dec. 28, '99	Negro.....	1 mo.....	28	Driver.....	Mule kicking.....	Head and body hurt ..	322
169	".....	Louisville.....	John Shrewsbury.....	Jan. 6, '00	American.....	3 yrs.....	32	Track layer.....	Mine cars, inside.....	Wrist and hand sprained	323
170	".....	Coaldale.....	Joseph Frayer.....	Jan. 20, '00	White.....	1 mo.....	33	Slate man.....	Fall of rock.....	Leg broken.....	324
171	".....	Louisville.....	John Cole.....	Apr. 12, '00	Colored.....	5 yrs.....	35	Miner.....	Fall of slate.....	Ankle and back bruised	325
172	".....	Goodwill.....	William Holland.....	Apr. 19, '00	Colored.....	13 mos.....	23	Miner.....	Fall of slate.....	Back bruised & strained	326
173	".....	Mill Creek.....	Thos. Warbarton.....	May 11, '00	White.....	1 yr.....	16	Brakeman.....	Mine cars, outside.....	Leg broken.....	327
174	".....	Goodwill.....	Wallace Goodson.....	May 17, '00	".....	3 yrs.....	15	Trapper.....	Run over by locomotive.	Right leg broken, body bruised.....	328
175	".....	Goodwill.....	W. F. Larrison.....	June 13, '00	".....	10 yrs.....	36	Miner.....	Fall of coal.....	Lumbar muscles strained, ankle sprained.....	329
176	".....	Mill Creek.....	Chas. Williams.....	June 16, '00	".....	5 yrs.....	45	Miner.....	Str'k by M. loco. outside.	Hurt on leg and back.....	330

CHAPTER XIV.

ANNUAL REPORTS OF THE DISTRICT INSPECTORS.

The table submitted below gives the number of inspections made by each of the Inspectors for each month of the year. The Inspectors each averaged 200 regular inspections during the year. This does not include the many visits made to the mines for the purpose of investigating accidents.

Number of Inspections made in the State from July 1st, 1899, to July 1st, 1900.

Districts.	No of Mines.	1899. July.	August.	September.	October.	November.	December.	1900. January.	February.	March.	April.	May.	June.	Totals.	Small Mines.	Grand Totals.
First.....	97	14	26	9	10	14	16	17	8	17	12	23	16	182	.....	182
Second.....	78	29	14	5	30	5	16	12	20	18	20	15	34	218	49	267
Third.....	82	19	19	14	20	14	19	21	13	7	15	20	20	201	.....	201
Fourth.....	54	13	15	17	14	20	12	21	9	16	20	21	22	200	.....	200
Totals	311	75	74	45	74	53	63	71	50	58	67	79	92	801	49	850

James W. Paul, Chief Mine Inspector, CHARLESTON.

S. A. Lewis, Inspector First District, FAIRMONT.

Jerry Meade, Inspector Second District, CHARLESTON.

Edward Pinkney, Inspector Third District, MONTGOMERY.

Wm. J. Preece, Inspector Fourth District, COALDALE.

FIRST DISTRICT.

Including the Counties of *Barbour*, Berkeley, *Brooke*, *Doddridge*, Grant, Hardy, Hampshire, *Harrison*, *Hancock*, Jefferson, Lewis, *Marshall*, *Marion*, *Monongalia*, Morgan, Ohio, *Preston*, Pendleton, *Randolph*, *Taylor*, *Tucker*, Tyler, Upshur and Wetzel.

(The italicised Counties are those in which coal mines are operated.)

S. A. Lewis,
Inspector.

State of West Virginia,
Office of First District Mine Inspector.

Fairmont, W. Va., June 30, 1900.

Hon. Jas. W. Paul, *Chief Mine Inspector*,
Charleston, W. Va.

Sir:—

I hereby present to you my annual report for the year ending June 30, 1900, for your consideration, which I hope will meet with your approval. In the year just closed I would say that it has been a very prosperous one for the Coal Companies and mine workers. As there have been about 40 new mines opened during the year there are now 115 commercial mines in this first district—a sufficient number to require two inspectors. During the past two years I have labored hard to keep the mines in as safe condition as possible, since some of the mines are generating large quantities of gas and require very close attention. If this is not done we may expect calamity. I only hope that the next term of the Legislature will enact a law giving the Mine Inspectors living wages for their services and that the Chief Inspector be given another deputy for the mines in my district. I have tendered to the Governor my resignation to take effect July 1st, 1900.

Wishing my successor much success, I am,

Yours very respectfully,

S. A. Lewis,
Mine Inspector, First District.

SECOND DISTRICT.

Including the Counties of Braxton, Calhoun, Cabell, Clay, Gilmer, Jackson, *Kanawha*, *Mason*, Pleasants, *Putnam*, Ritchie, Roane, Wayne, Wirt and Wood.

(The italicised Counties are those in which coal mines are operated.)

Jerry Meade,
Inspector.

State of West Virginia,
Office of Second District Mine Inspector.

Charleston, W. Va., Sept. 30, 1900.

Hon. James W. Paul, Chief Inspector of Mines,
Charleston, W. Va.

Dear Sir:—

I have the honor of presenting to you my report as Inspector

of Mines for the Second Mining District for the year ending June 30, 1900. This, my third annual report, I am pleased to state that we have had a year of comparative peace and harmony between operators and miners and but very few strikes have occurred, none of which assumed any magnitude and deserve no more than mere mention, and were adjusted with but little loss to either miners or operators. In looking back over the past year and remembering the many occasions for suggesting and ordering changes and improvements I am pleased with the promptness and willingness on the part of nearly all operators in complying with my requests and with their evident desire to comply with the mining laws of the State.

During the fiscal year ending June 30, 1900, I made 218 inspections besides 49 visits to small mines, which do not come within the limit of the mining laws, to ascertain as near as possible the quantity of coal produced by them during the year. The most difficult task that I have had with which to contend as Mine Inspector is the securing of a second opening and getting break-throughs driven between rooms and these conditions have been improved upon to a great extent during the past year. The following mines were abandoned during the year, or not in operation:

Consumers, C. & M. Co., New Haven, Mason County.
Bancroft Mine, Putnam County.
Queen City, Putnam County.
Bibbie Mine, Kanawha County.
Cedar Grove Seam, at Black Cat, Kanawha County.
Cedar Grove Seam, at Belmont, Kanawha County.
Cedar Grove Seam, at Crown Hill, Kanawha County.
Kanawha Seam, at Belmont, Kanawha County.
D. No. 4, Mammoth, Kanawha County.
Big Black Band on Lens Creek, Kanawha County.

New Mines Opened.

MASON COUNTY.

Consumers C. & M. Co., at Cedar Hill.
Pierce Mine on McDaniels farm.
Harris Mine re-opened.

KANAWHA COUNTY.

White Mine on Campbells Creek.
Arbuckle Mine, Winifrede C. Co.
Sharpe Mine on Davis Creek.

Cedar Grove Mine at Cedar Grove re-opened, and No. 5 seam at Cedar Grove, No. 3 gas coal seam, Montgomery C. Co. being robbed out.

Empire Mine at Acme.

Mine by C. C. & S. R. R. Co. at Queen Shoals. ,

This communication was addressed to 38 operators of small mines:

Office of Second District Mine Inspector,
Charleston, W. Va., June 30, 1900.

Dear Sir:—

Will you kindly furnish this department information as to the quantity of coal produced at your mine from July 1, 1899 to June 30, 1900, as we are anxious to ascertain, as near as possible, the quantity of coal mined in the State in the past fiscal year?

Very respectfully,

Jerry Meade,
Mine Inspector, Second District.

Fans were put up at the following mines:

Black Cat.. .. .	2
Belmont.....	1
Crown Hill.....	1
Cedar Grove Seam at Cedar Grove... ..	1
East Bank.....	1
B Mine at Mammoth.....	1
Big Mountain, Coalburg seam.. .. .	1
D No. 4, Mammoth.....	1

No. 2 Mine, Handley..... 1

Furnaces constructed:

Pocatalico Mine, Putnam County.....	2
Cedar Hill Mine, Mason County.....	1
Sharpe Mine, Kanawha County....	1

There have been many improvements made at several mines in the past year by way of electric motor haulage.

An electric plant was constructed by the Marmet-Smith C. & M. Co. and an electric motor installed in the Pocatalico Mine.

Two electric motors at Acme and the electric plant enlarged.

One electric motor at Belmont, one electric motor at Crown Hill and a box car loader constructed, one electric motor at Little South Winifrede and one electric plant and electric motor at Cannelton No. 2.

Several mining machines have also been introduced in many

of the mines in this district with considerable success, notably are Marmet-Smith C. & M. Co., Campbells Creek C. Co., Winifrede C. Co., Stevens C. Co., Belmont C. Co., Kanawha C. M. Co., Big Mountain M. Co., Riverside C. Co. and Kellys Creek M. Co. This last Company has also built several very comfortable houses for its miners during the past year and doubled the capacity of the electric plant.

I also desire to state that my official relations with the operators and other officials have been of the most pleasant nature for which I feel grateful and, in conclusion, permit me to thank you, Sir, for your kind advice and able assistance rendered as well as the many courtesies extended to me during the past year.

Yours truly,

Jerry Meade,
Mine Inspector, Second District.

THIRD DISTRICT.

Including the Counties of *Fayette*, Greenbrier, Monroe, Nicholas, Pocahontas *Raleigh*, Summers and Webster.

(The italicised counties are those in which coal mines are operated.)

State of West Virginia,
Office of Third District Mine Inspector.
Montgomery, W. Va., July 30, 1900.

James W. Paul, Esq.,
Chief Mine Inspector,
State of West Virginia.

My Dear Sir:—

I have the honor to submit to you my third annual report, for the year ending June 30, 1900.

During the past year all classes of labor, in connection with the mining business in this Third District have been regularly employed and at fairly remunerative wages, except however the short time in September and October when the strike for an advance in the mining rate was made, which resulted in several of the mines in the New River region shutting down for a period of time ranging from three to five weeks, after which a satisfactory settlement was arrived at and work resumed.

During the present year I have made two hundred and forty-two official visits to the various mines for inspection and investigation purposes respectively which have been written up regularly and forwarded to you as required by our mining laws.

The conditions of the various mining operations, which have ninety separate openings, as a general rule are fairly good, and in many instances have been much improved during the present year, and particularly so in the ventilation departments.

Several new fans of various sizes, ranging from eight to twenty feet in diameter, have been installed during the present year, making a total of forty-five mines now ventilated by fan power, twenty-three by furnaces of various dimensions and twenty-two by natural ventilation.

Eleven hundred and eighty-three bee-hive coke ovens have been built by various Companies, making a total now in this District of three-thousand-one-hundred and ten ovens. One-hundred and ninety-three of this number being Welch ovens, the balance bee-hive.

Several new electric, air and steam plants have been installed for hauling and mining purposes, making a total of the various plants in this District, as follows: twenty-one rope hauling plants, operated by steam power; seventeen electric plants, nine of which are used for hauling, mining and other purposes combined, eight of which are used for mining, fan, pumping and illuminating power; eleven compressed air plants which are used for mining, fan and pumping purposes, and at one mine, the Vulcan, the hauling is done by a compressed air locomotive.

There is, in addition to the above, fourteen small steam locomotives used for haulage purposes in the District, principally on the tram-roads leading along the mountain side from the drum houses, where used, to the mouth of the mines.

Several new mines have been opened during the year, namely: In Raleigh County, the Piney C. & C. Co.'s mine, the Wright C. Co.'s mine, both of which are opened in the Quinnimont seam on Piney Creek, a tributary of New River and on a branch line of the C. & O. R. R., leaving the main line at Prince. In Fayette County—Derryhale Mine, Sun C. & C. Co.'s. Shaft Mine No. 2, Dunn Loop C. Co.'s No. 2 Mine, White Oak Fuel Co.'s Shaft Mine, all of which are developing the Sewell Seam and are situated on Dunn Loop Creek, a tributary of New River and on the Big Loup Branch of the C. & O. R. R.; W. P. Rend's three A, B, and C Mines on Arbuckle Creek, another tributary of New River. "A" Mine is developing the Fire Creek Seam, "B" and "C", the Sewell Seam. The Kaymore Mines, on the south side of New River and on the South Side Branch of the C. & O. R. R. These mines are developing in the Sewell seam.

In addition to the above, four new openings are in progress on Slater Creek in the Fire Creek Seam. The Central C. Co. has opened up a new mine in the Sewell Seam on their property. Several new openings have been made by the Greenwood and Quinnimont Coal Cos. on Laurel Creek to increase the output of their present operations.

The Gauley Colliery Co.'s Mine at Kanawha Falls, Carbon C. Co.'s and Raven C. Co.'s Mines on Smithers Creek. These mines are developing the Kanawha Gas Seam No. 2 and are situated on the Gt. Kanawha River and K. & M. R. R., and the Gt. Kanawha Colliery Co.'s No. 5 splint mine at Mt. Carbon. Several new openings have been made by other Companies to increase their output and for ventilation and drainage purposes.

The following mines have been abandoned during the past year: Quinnimont Old Mine on Laurel Creek and Greendale on the Gauley River.

Many improvements of a substantial nature have been made at almost every mine in the District, such as new tipples, relaying of roadways with heavy steel rails, enlargement of storage bins, erection of coal crushers, elevators, dwelling houses, etc.

I regret to have to report that our fatalities during the past year have been somewhat larger than usual. There having been sixty-four lives lost in the district since my last report. As you are already aware of the fact that forty-six of those deaths were caused by the unfortunate explosion at the Red Ash Mine on the 6th day of March, which accident was thoroughly investigated and the findings reported to you as required by our mining laws. This leaves our fatalities, under ordinary circumstances, much less than in former years in proportion to the number of men employed and the tonnage of coal produced.

In conclusion I desire to call your attention to the fact that it is very desirable that, at our coming Legislature, an effort be made to improve our mining laws to some extent in order, if possible, to abolish the filthy practice which is still considerably practiced in our mines in the use of oils of a very injurious nature for illuminating purposes, also to designate a fixed distance which all places (entries or rooms) shall be driven between breakthroughs. As our laws now are, it is an open question and it is often taken advantage of. I also hold the opinion that for the future safety of our miners and other workmen employed in our mines generating fire damp, doors should, where possible, be dispensed with and overcasts substituted instead and stoppings of an incombustible character be built of bricks or rock laid in cement and set firmly into the coal wall on either side in order to resist, if necessary, a powerful shock and not turn over. They should be built along the line of main entry from the mouth of the mine to the face of the advance workings, where the most danger is to be always apprehended. Powder or dynamite in large quantities should be strictly prohibited in our mines and especially so where gas is known to exist or where electricity in any form is being used.

We are already opening up shaft mines at considerable

depth and where explosive gases are known to generate very freely in mines of this description no safeguard should be omitted that can consistently be applied. Doors in a gasy mine are a source of great danger when entrusted to the care of irresponsible people or young boys.

Hoping the above remarks will have your approval, I desire to return my sincere thanks to the employers and workmen of the third district for the kind and courteous manner in which they have received and treated me during the past year in all my dealings with them and to you for your many valuable suggestions and advice.

Most respectfully yours,
EDWARD PINKNEY,
Inspector Third District,
State of W. Va.

FOURTH DISTRICT,

Including the Counties of Boone, Lincoln, Logan, *McDowell*,
Mercer, *Mingo* and Wyoming.

(The italicised counties are those in which coal mines are operated.)

Wm. J. Preece, Inspector,
Coaldale, W. Va.

No written report.—See condition of mines, Chapter XV.

CHAPTER XV.

DIRECTORY OF AND CONDITION OF THE MINES.

By reason of the late date on which the printer of this report took charge of the manuscript,—July, 1901, it has been thought advisable not to give a full written description of the conditions of each mine for reason of the time being so near when the nineteenth annual report is due, so the condition of the mines is here reported as in Parts I and II.

1. Wherein a mine is found to comply with the requirements of the law it is classified as in *good* condition.

2. Wherein a mine has good ventilation, poor drainage, good timbering, muddy roads, such as to render the mine healthful but slightly dangerous, it is classified as in *fair* condition.

3. Insufficient ventilation, wet roads upon which miners have to travel, leaky stoppings and lack of timbering are sufficient to classify a mine as in *bad* condition.

In the column after the classification will be found wherein the mine is deficient.

*Condition in which the Miners were found upon Inspections
made for the year ending June 30, 1900.*

FIRST DISTRICT, S. A. LEWIS, INSPECTOR.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in.
1	Barbour.....	Junior No. 1.....	Junior Coal Co.....	good.	
2	"	Kelly.....	Philippi Coal Mining Co.....	fair.	Ventilation.....
3	"	Arden.....	Tygarts Valley C. & C. Co.	good.	Map not extended
4	"	Custer.....	Laurel Hill Coal & C. Co.	good.	
5	"	Arden.....	Laurel Creek Coal Co.....		
5½	"	Berrysburg No. 1.....	Southern Coal & Trans. Co.		
6	Brooke.....	Blanche.....	Panhandle Coal Co.....	good.	
7	"	Gilchrist.....	Gilchrist Coal Co.....	"	
8	"	Wellsburg.....	J. W. M. Carmichael.....	"	
9	Hancock.....	Sligo.....	Mack Mfg. Co.....		
10	"	Marquet No. 1.....	Marquet Coal Co.....	good.	
11	"	Marquet No. 2.....	Marquet Coal Co.....	good.	
12	"	McElfresh.....	McElfresh Fire Clay Co.....		
13	Harrison.....	Worthington No. 2.....	Worthington Coal & C. Co.	fair.	Ventilation.....
14	"	Farnum.....	Globe Coal & Coke Co.....	fair.	V'til't'n & drain...
15	"	Jackson No. 1.....	Pinnickinnick Coal Co.....	good.	
16	"	Fall Run No. 2.....	Pinnickinnick Coal Co.....		
17	"	M'lsby or Bri'. Hill No. 7	Briar Hill Coal & Coke Co.	"	
18	"	Har. or Briar Hill No. 6	Briar Hill Coal & Coke Co.	"	
19	"	Gyp. or Briar Hill No. 5	Briar Hill Coal & Coke Co.	"	
20	"	Enter. or Bri'. Hill No. 3	Briar Hill Coal & Coke Co.	"	
21	"	Farn. or Bri'. Hill No. 1	Briar Hill Coal & Coke Co.	"	
22	"	Glen Falls.....	Glen Falls Coal & C. Co.	"	
23	"	Howard.....	Howard Coal & Coke Co.....	"	
24	"	No. 2.....	Despard Gas Coal Co.....	fair.	Ventilation.....
25	"	No. 1 and 2.....	West Fork Mining Co.....	good.	
26	"	Fairmore.....	Fair'ont & Balt. C. & C. Co.	fair.	Ventilation.....
27	"	Lynch.....	Hutchinson Coal Co.....	fair.	Ventilation.....
28	"	Ocean.....	Cleveland & Fair. C. & C. Co.	good.	
29	"	Columbia.....	Columbia Coal & Coke Co.	"	
30	"	Riverdale.....	Riverdale Mining Co.....	"	
31	"	Viropa.....	Viropa Coal & Coke Co.....	"	
33	"	Solon.....	Solon-Lowery Mining Co.....	"	
34	"	Meadow Brook.....	Meadow Brook C. & C. Co.	"	
36	"	Dolan.....	Hutchinson Fuel Co.....	"	
38	Marion.....	West Fairmont Shaft.....	West Fairmont C. & C. Co.	"	
39	"	New England.....	West Fairmont C. & C. Co.	"	
40	"	Gaston.....	Gaston Gas Coal Co.....	"	
41	"	Montana.....	Montana Coal & Coke Co.....	"	
42	"	Aurora.....	Montana Coal & Coke Co.....	fair.	Ventilation.....
43	"	Luther.....	Mason Coal & Coke Co.....	good.	
41	"	M'rray or Bri'. Hill No. 2	Briar Hill C. & C. Co.	"	
45	"	King.....	Virginia & Pitts. C. & C. Co.	"	
46	"	No. 2, 3 and 5.....	Monongah Co.....	"	
47	"				
48	"				
49	"	Middleton.....	Monongah Co.....	"	
51	"	Anderson.....	Clark Coal & Coke Co.....	"	
52	"	Chiefton.....	J. A. Clark Coal Co.....	"	
53	"	Pennois.....	Pennois Coal & Coke Co.....	"	
54	"	Worthington No. 1.....	Worthington Coal & C. Co.	"	
55	"	Highland.....	Highland Coal & Coke Co.	"	
57	"	Palatine.....	Palatine Coal Co.....	"	
59	Marshall.....	Boggs Run.....	Boggs Run Mfg. & Mfg. Co.	"	
60	"	Benwood.....	Wheeling Steel & Iron Co.	"	
61	"	Glendale Shaft.....	Glendale Coal Co.....	bad.	V'til't'n & drain...
62	"	Moundsville.....	Moundsville Coal Co.....	good.	
65	Mineral.....	Hampshire.....	Davis Coal & Coke Co.....	good.	
66	"	Savage.....	Davis Coal & Coke Co.....	fair.	Ventilation.....
67	"	Windom.....	Davis Coal & Coke Co.....	good.	
68	"	Elk Garden.....	W. Va. Cen. & Pgh. Ry. Co.	"	
70	Monongalia.....	Opekiska.....	Opekiska Coal & Coke Co.	"	
71	"	Beechwood B. H. No. 4	Briar Hill Coal & C. Co.....	"	
72	Ohio.....	Whitaker.....	T. E. Kasley & Son.....	"	

*Directory of Mines, Names of Coal Beds, Kinds of Ventilation
and Total Number of All Kinds of Inside Employees for
the Year Ending June 30, 1900.*

Name of Super- intendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked. Name.	Thick- ness. Ft. In	Kind of Ven- tilation.	Total Inside Employees.	No.
	W. A. Cox.....	Elkins.....	Freeport.....	5-6	bask.....	58	1
J. E. Reed.....	Walter Mathews.....	Meridian.....	".....	6	fan.....	93	2
S. W. Shrader.....	Chas. Watkins.....	Grafton.....	".....	5-10.....	furn.....	34	3
S. R. McCamey.....	Samuel Hale.....	Dartmoor.....	Masontown.....	5-2	nat.....	35	4
W. S. Brydon.....	".....	Arden.....	Freeport.....	5-6	hot air.....	13	5
Ernest Chilson.....	G. Bird & Chas. Priest.....	Berrysburg.....	Pittsburg.....	9	fan.....	72	5 ¹ / ₂
W. A. Ward, R.....	T. Ritson.....	Colliers.....	".....	4	furn.....	43	6
A. Gilchrist.....	William Gilchrist.....	Lazearville.....	".....	4	".....	34	7
J. W. M. Carnil.....	Possey Cheek.....	Wellsburg.....	".....	5	".....	26	8
".....	James Burns.....	N. Cumb'land.....	Roger.....	3	fan.....	8	9
O. L. Marquet.....	Wilson Holmes.....	N. Cumb'land.....	Pittsburg.....	4-6 to 5.....	furn.....	24	10
O. L. Marquet.....	Hugh Sutherin.....	N. Cumb'land.....	".....	5 to 5-6.....	".....	14	11
".....	".....	Penrith.....	".....	3-6 to 4.....	stack.....	8	12
J. F. Cook.....	F. A. Grinstead.....	Fairmont.....	".....	8	fan.....	45	13
R. W. Adleck.....	Jas. Craig.....	Farum.....	Fairmont.....	8-6	furn.....	35	14
Jno. H. Clifford.....	Mathew Maunix.....	Clarksburg.....	Pittsburg.....	9 to 10.....	".....	150	15
Jon. H. Clifford.....	Frank Flaherty.....	Clarksburg.....	".....	9 to 10.....	".....	60	16
Jno. O. Brooks.....	B. F. Freeman.....	Fairmont.....	".....	8-8	fan.....	28	17
Jno. O. Brooks.....	W. W. Jackson.....	".....	".....	8-8	nat.....	15	18
Jno. O. Brooks.....	Edward Muir.....	".....	".....	8-8	fan.....	27	19
G. W. Fleming.....	H. S. Toothman.....	".....	".....	7-6	".....	132	20
H. H. Watson.....	P. J. McAndrew.....	".....	".....	8-2	nat.....	55	21
J. F. Jones.....	Chas. Vickers.....	Glen Falls.....	".....	9	furn.....	48	22
John Temple.....	Wm. Francis.....	Wilsonburg.....	".....	6-6	".....	74	23
Mord Lewis.....	Jas. Latstetter.....	Clarksburg.....	".....	9	shaft.....	39	24
F. H. Tibbets.....	No. 1, W. P. Weekly No. 2, A. D. Mitchell.....	Mt. Clare.....	".....	6-6	furn.....	41	25
T. E. Thomas.....	".....	Fairmont.....	".....	8	fan.....	73	26
S. A. Lewis.....	E. D. Roush.....	Mt. Clare.....	".....	8	shaft.....	35	27
E. P. Goedecke.....	J. C. Hallam.....	Fairmont.....	".....	8	fan.....	50	28
W. A. Sm'rv'le.....	".....	".....	".....	8	".....	60	29
Alex. Purdy.....	Wm. Reid.....	".....	".....	9	nat.....	7	30
Alex. Purdy.....	Wm. Reid.....	".....	".....	9	furn.....	4	31
David Brown.....	David Brown.....	Shinnston.....	".....	8-4	".....	25	32
Jas. F. Cook.....	P. Robinson.....	Meadow Brook.....	".....	8	fan.....	40	34
S. A. Lewis.....	Wm. Goodnite.....	Wolf Summit.....	".....	8	nat.....	5	36
W. B. Brooks.....	J. J. Brennen.....	Fairmont.....	".....	8-6	fan.....	230	38
W. B. Brooks.....	J. Thompson & J. R't, Jr.....	".....	".....	8-6	".....	349	39
S. L. Watson.....	G. B. Brown.....	".....	".....	8-6	".....	228	40
J. C. Gaskill.....	C. E. Gaskill.....	".....	".....	7	".....	227	41
J. C. Gaskill.....	E. A. Freeman.....	".....	".....	7	furn.....	33	42
A. B. McDonald.....	Frank Parsons.....	Scottdale.....	".....	8	fan.....	57	43
Geo. F. Watson.....	E. A. Freeman & J. Cart'r.....	Fairmont.....	".....	8	".....	114	44
R. M. Hite.....	R. M. Hite.....	".....	".....	9	".....	64	45
A. J. Ruckman.....	A. E. Reppert.....	Monongah.....	".....	8-6	".....	628	46
J. H. Wh'l'right.....	Jas. Rogers.....	".....	".....	8-6	furn.....	25	47
T. S. Haymond.....	Geo. Coburn.....	Fairmont.....	".....	8	fan.....	128	51
Jas. Sterrat.....	Chas. Brooks.....	".....	".....	8	".....	155	52
D. B. Brooks.....	D. B. Brooks.....	".....	".....	8-10.....	".....	70	53
Jas. F. Cook.....	M. Pollock.....	".....	".....	8	".....	85	54
J. H. Wh'l'right.....	Jas. Rodgers.....	Monongah.....	".....	8-6	".....	85	55
M. D. Orr.....	J. C. McKinney.....	Fairmont.....	".....	9	nat.....	20	57
Philip Kunz.....	Eugene Miller.....	Wheeling.....	".....	5-6	fan.....	46	59
".....	Robt. Wilson.....	".....	".....	6	furn.....	38	60
F. H. Blake.....	T. E. Wallace.....	Glendale.....	No. 8.....	6	fan.....	102	61
John W. Berry.....	E. C. Pickett, Jr.....	Moundsville.....	Pittsburg.....	6	".....	89	62
O. Tibbets.....	John Roland.....	Savage & Thos.....	6 ft.....	5-8	".....	91	65
O. Tibbets.....	P. Messinger.....	Savage & Thos.....	4 ft.....	3	".....	93	66
O. Tibbets.....	J. B. Rankin.....	Savage & Thos.....	Pittsburg.....	7 & 12.....	nat.....	91	67
W. T. Blackist'n.....	F. Wilson.....	Elk Garden.....	".....	12	".....	243	68
Thos. L. Kuml.....	M. Callaghan.....	Opekiska.....	".....	7	".....	32	70
H. Bainbridge.....	Harry Bainbridge.....	Fairmont.....	".....	7	".....	45	71
W. H. Kasley.....	Wm. Magruder.....	Wheeling.....	".....	5	fan.....	22	72

*Condition in which the Mines were found upon Inspection
Made for the year ending June 30, 1900.—Continued.*

FIRST DISTRICT, S. A. LEWIS, INSPECTOR.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in.
73	Ohio.....	Richland	Richland Coal Works.....	good	.....
74	"	Elm Grove.....	Elm Grove Coal Co.....	fair...	V'nt'l'n & § 8, M. L.
75	"	La Belle.....	La Belle Iron Works.....	good.	.....
76	Preston.....	Austin.....	Austin Coal & Coke Co.....	fair...	Ventilation.
79	"	Gorman No. 1 at W. E.	Gorman Coal & Coke Co.....	good.	.....
81	"	South Side, No. 2 and 3	Merchants Coal Co.....	good.	.....
82	"	North Side, No. 1.....	Merchants Coal Co.....	good.	.....
81	"	Irona.....	Irona Coal Co.....	good.	.....
85	"	Oakland.....	Oakland Coal & Coke Co.	.....	.....
85 ¹ / ₂	"	Newburg Shaft.....	Austin Coal & Coke Co.....	good.	Speaking Tube.
88	Taylor.....	Fahey.....	Grafton Coal & Coke Co.....	good.	.....
89	"	Sandlick.....	Grafton Coal & Coke Co.....	good.	.....
90	"	Flemington.....	Flemington C. & C. Co.....	good.	.....
91	"	Tyreonnell.....	Colonial Coal & Coke Co.	fair...	Ventilation.
92	"	New York.....	New York Coal Co.....	fair...	Ventilation.
93	"	Foster.....	B. F. Radabaugh & Co.....	fair...	Ventilation.
95	Tucker.....	Douglas.....	Cumberland Coal Co.....	good.	.....
96	"	Thomas Drift.....	Davis Coal & Coke Co.....	good.	.....
97	"	Thomas Shaft.....	Davis Coal & Coke Co.....	fair...	Ventilation.
99	"	Coketon, No. 1.....	W. Va. C. & P. Ry. (M. Dept)	fair.	Ventilation.
100	"	Coketon, No. 2.....	W. Va. C. & P. Ry. (M. Dept)	good.	.....
101	"	Coketon, No. 3.....	W. Va. C. & P. Ry. (M. Dept)	good.	.....
103	Randolph.....	Randolph.....	Randolph Coal Co.....	good.	.....
104	"	Harding, No. 1.....	Junior Coal Co.....	good.	.....
105	"	Leiter.....	Maryland Smokeless C. Co	good.	.....

SECOND DISTRICT, JERRY MEADE, INSPECTOR.

106	Kanawha..	Queen Shoals.....	Elk River Coal & Coke Co.	fair...	V'nt'l'n & 2nd opg
107	"	Falling Rock.....	Falling Rock Cannel C. Co	fair...	Ventilation
108	"	Graham.....	W. W. Graham.....	fair...	Ventilation
109	"	Peacock.....	F. C. Williams & Co.....	bad...	Ven. & Map of M.
110	"	Sycamore.....	F. C. Williams & Co.....	bad...	Ven. & Map of M.
111	"	Spring Fork.....	Campbells Creek Coal Co.	good.	.....
112	"	New Mine.....	Campbells Creek Coal Co.	good.	.....
113	"	White.....	White & Calderwood.....	bad...	Ven. & Drainage..
114	"	Black Diamond.....	New Diamond Coal Co.....	fair...	Ventilation
115	"	Quincy.....	Quincy Coal Co.....	good.	.....
116	"	Peabody.....	Peabody Coal Co.....	fair...	Ventilation
117	"	Monarch.....	Victor Coal Co.....	bad...	Ventilation
118	"	Virginia.....	Virginia Mining Co.....	good	.....
119	"	Coalburg Splint.....	Big Mountain Mining Co.	bad...	Ventilation
122	"	B. No. 4.....	Kellys Creek Mining Co.	bad...	Ventilation
123	"	C. No. 2.....	Kellys Creek Mining Co.	good.	.....
124	"	C. No. 3.....	Kellys Creek Mining Co.	fair...	.....
125	"	C. No. 4.....	Kellys Creek Mining Co.	good.	.....
129	"	Cedar Grove.....	Cedar Grove Colliery Co...	fair...	Ventilation
130	"	Riverside.....	Riverside Coal Co.....	fair...	Ventilation
131	"	No. 2 Gas.....	Cannelton Coal Co.....	fair...	Ventilation
132	"	Cannel.....	Cannelton Coal Co.....	fair...	Ventilation & Map
134	"	Lens Creek or No. 1. Brabbin or No. 2.....	The Marmet Co.....	good.	.....
136	"	South.....	Winifrede Coal Co.....	fair...	Ventilation
137	"	Winifrede Gas.....	Winifrede Coal Co.....	fair...	Ven. & Drainage..
139	"	North.....	Winifrede Coal Co.....	good.	.....
140	"	Ronda.....	Coalburg Colliery Co.....	good.	.....
142	"	Aeme.....	Stevens Coal Co.....	good.	.....
142 ^a	"	Keystone.....	Stevens Coal Co.....	good.	.....
143	"	No. 4.....	Robinson Coal Co., G. W. McClintie, Receiver....	fair...	Ven., D'ge & Map.

*Directory of Mines, Names of Coal Beds, Kinds of Ventilation,
and Total Number of all Kinds of Inside Employees for
the Year Ending June 30, 1900.—Continued.*

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked Name.	Thick-ness. Ft. In.	Kind of Ven-tilation.	Total Inside Employees.	No.
J. P. Gilchrist.	John Aitkin.	Wheeling.	Pittsburg.	5-6.	shaft.	54	73
J. B. Chambers.	John Costellow, Jr.	Elm Grove.	"	6.	fan.	56	74
Chris. Becker.	Chris. Becker.	Wheeling.	"	5.	stack.	43	75
F. W. Horschler.	G. R. Cook.	Austin.	Austin.	4-6.	fan.	63	76
Wm. Ramsay.	Wm. Gray.	Tunnelton.	Up. Freeprt	5.	furn.	45	79
W. N. Eaton.	Grant Mathews.	Tunnelton.	Up. Freeprt	5-2.	fan.	66	81
W. N. Eaton.	W. F. Harvey.	Tunnelton.	Up. Freeprt	4-6.	furn.	117	82
Fred C. Todd.	John Henry.	Kingwood.	Freeport.	4-8.	fan.	104	84
R. I. Anderson.	R. I. Anderson.	Corinth.	Pittsburg.	4-2.	shaft.	36	85
Thos. Bitson.	Thos. Burduss.	Newburg.	Up. Freeprt	4-6.	fan.	27	85½
John W. Fahey.	L. W. Donahue.	Grafton.	Pittsburg.	9.	nat.	77	88
John W. Fahey.	W. J. Phillips.	Grafton.	"	7.	nat.	46	89
Waltersimpson.	John McDowell.	Flemington.	"	8.	fan.	234	90
J. H. Henry.	Robt. Love.	Tyrconnell.	"	"	nat.	"	91
L. B. Brydon.	W. M. Drainer.	Simpson.	"	8.	furn.	89	92
B. F. R'd'b'gh.	F. V. Robinson.	Simpson.	"	8.	shaft.	23	93
J. B. Jenkins.	Ed. Pili.	Albert.	Davis.	6.	fan.	150	95
Lee Ott.	Wm. Barrick.	Thomas.	Thomas.	7-6.	fan.	445	96
Lee Ott.	Jas. G. Boyd.	Thomas.	Davis.	6.	fan.	130	97
J. C. Brydon.	A. G. Smith.	Coketon.	"	6.	nat.	43	99
J. C. Brydon.	A. G. Smith.	Coketon.	"	3-6.	fan.	178	100
J. C. Brydon.	C. H. Bice.	Coketon.	"	6.	fan.	204	101
F. P. Rease.	R. D. Edwards.	Belington.	Up. Freeprt	7.	furn.	49	103
A. C. Finley.	J. M. Davis.	Harding.	Up. Freeprt	9.	nat.	34	104
F. P. Rease.	Thos. Hamilton.	Belington.	Up. Freeprt	5-6.	furn.	16	105

J. B. Carson.	J. W. Carson.	Charleston.	Snyder.	3-8.	furn.	11	106
L. W. Couch.	N. C. Paston.	Weir.	Cannel.	2-6.	fan.	17	107
	E. G. Archibald.	Graham Mines.	6 ft.	6.	furn.	37	108
I. O. Burns.	I. O. Burns.	Graham Mines.					109
F. C. Williams.	Wm. Coon.	Graham Mines.					110
J. E. Dana.	W. B. Calderwood.	Malden.	Campb. Cr.	4.	shaft.	131	111
J. E. Dana.	W. B. Calderwood.	Malden.	Campb. Cr.	5.	fan.	129	112
		Malden.	Campb. Cr.	5-6.		7	113
Arthur Rob's'n.	James Arrington.	Diamond.	Winifrede.	4.	nat.	50	114
Wm. Dickinson.	J. M. Kelly.	Diamond.	Lewiston.	3-4.	furn.	10	115
J. A. Canter.	J. J. Neylan.	Shrewsbury.	Big Seam.	6-6.	nat.	70	116
R. L. Slack.	Henry Tucker.	Monarch.	Cedar Grove.	3.	furn.	31	117
Henry Davis.	Ben Hull.	Cedar Grove.	Cedar Grove.	2-6 to 3.	fan.	71	118
Henry Davis.	John Green.	Cedar Grove.	Coalburg.	4 to 5.	fan.	65	119
J. W. Dawson.	W. H. Meas.	Mammoth.	Coalburg.	5.	furn.	77	122
J. W. Dawson.	Wm. Shannon.	Mammoth.	No. 5.	6-5.	fan.	87	123
J. W. Dawson.	Wm. Shannon.	Mammoth.	Lewiston.	4-6.	fan.	13	124
J. W. Dawson.	John Holden.	Mammoth.	Coalburg.	5-4.	fan.	26	125
J. D. Harris.	C. Armstrong.	Cedar Grove.	Cedar Grove.	3-2.	fan.	50	129
J. R. Thomas.	J. S. Miller.	Riverside.	Cedar Grove.	3.	fan.	150	130
Langdon Lea.	Robert Taylor.	Cannelton.	No. 2.	6-11.	fan.	123	131
Langdon Lea.	Robert Taylor.	Cannelton.	Cannel.	9.	nat.	45	132
L. W. Atkinson.	James W. Noble.	Marmet.	Marmet.	3-6.	3 fur.	95	134
R. B. Cassidy.	Jas. Morgan.	Winifrede.	Winifrede.	5.	fan.	120	136
R. B. Cassidy.	Eli Cooper.	Winifrede.	Winifrede Gas.	2-9.	furn.	11	137
R. B. Cassidy.	Jas. Morgan.	Winifrede.	Winifrede.	5.	fan.	166	139
J. W. Moore.	J. A. Turner.	Ronda.	Coalburg.	7-6.	furn.	78	140
E. H. Shonk.	W. H. Morris.	Acme.	Up. Freeprt	4-6.	fan.	60	142
E. H. Shonk.	J. S. Helmes.	Acme.	Lo. Kittan.	5-6.	fan.	93	142
A. M. Wld'dge	R. G. Poff.	Coalburg.	Lo. Freeport	5-8.	furn.	59	143

*Condition in which the Mines were found upon Inspection
made for the year ending June 30, 1900.—Continued.*

SECOND DISTRICT, JERRY MEADE INSPECTOR.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in.
144	Kanawha...	Klondike	Robinson Coal Co., G. W. McClintie, Receiver.....	fair...	Ven. & drainage...
147	"	Chestnut Point.....	East Bank Coal & Coke Co.....	bad...	Ventilation
148	"	Black Cat.....	Kanawha Mining Co.....	fair...	Ventilation
150	"	Crown Hill.....	Crown Hill Coal Co.....	fair...	Ven. & drainage...
		Coalburg	Belmont Coal Co.....	good...	.....
151	"	Lewiston	Belmont Coal Co.....	bad...	Ventilation
161	"	Chesapeake	Chesapeake Mining Co.....	fair...	Ventilation
162	"	Consolidated	Montgomery Coal Co.....	good...	.....
163	"	Mt. Morris.....	Montgomery Coal Co.....	bad...	Ventilation
165	"	Rose Dale.....	Davis Creek Coal Co.....	bad...	Ventilation
166	Mason	Camden	Camden Clay Co.....	fair...	Ven. & drainage...
167	"	Beech Grove.....	Beech Grove Coal Co.....	fair...	Ven. & drainage...
168	"	Hope.....	Hope Salt & Coal Co.....	fair...	Ven. & drainage...
169	"	Mason	Mason City Mining Co.....	fair...	Ven. & drainage...
170	"	Liverpool	Liverpool Salt & Coal Co.....	fair...	Ven. & drainage...
171	"	Hartford	Hartford City Salt Co.....	fair...	Ven. & drainage...
172	"	New Haven	Consumers Coal M'n'g Co.....	fair...	Ven. & drainage...
173	"	New Castle.....	Consumers Coal M'n'g Co.....	fair...	Ven. & drainage...
174	Putnam.....	Plymouth.....	Carver Coal Co.....	fair...	Ven. & drainage...
175	"	Florence.....	Marmet, Smith C. M. Co.....	fair...	Ventilation
176	"	Pocatalico.....	Marmet, Smith C. M. Co.....	good...	.....

THIRD DISTRICT, EDWARD PINKNEY, INSPECTOR.

178	Fayette.....	No 1 and 2.....	Longacre Colliery Co.....	No. 1 & No 2g	Ventilation
179	"	No. 2 and 5.....	W. R. Johnson & Co.....	fair...	Ven. & drainage...
181	"	Boomer	Boomer Coal & Coke Co.....	good...	.....
182	"	No. 5 Eureka.....	Davis, Gordon Co.....	good...	.....
183	"	Eureka Gas, No 2.....	Davis, Gordon Co.....	good...	.....
184	"	Mecca.....	Mecca C. & C. Co.....	good...	.....
186	"	Straughan	Coal Valley Mining Co.....	good...	.....
187	"	Eagle No. 1	W. R. Johnson.....	good...	.....
188	"	Gas No. 2	W. R. Johnson.....	fair...	Ven. & drainage...
189	"	No. 5 Block.....	W. R. Johnson.....	fair...	Drainage.....
190	"	Gas No. 2.....	Carver Brothers Co.....	good...	.....
191	"	Edgewater No. 5.....	Carver Brothers Co.....	fair...	Drainage.....
192	"	Eagle	Carver Brothers Co.....	good...	.....
193	"	No. 1.....	Carver Brothers Co.....	fair...	Ventilation
195	"	No. 1.....	The St. Clair Co.....	bad...	Ventilation
196	"	No. 2.....	The St. Clair Co.....	good...	.....
197	"	Forest Hill.....	Vance C. Co.....	fair...	Ventilation
198	"	Diamond	J. F. Burdette.....	good...	Refuge holes.....
199	"	Excelsior	The Mt. Carbon Co., Ltd.....	good...	.....
200	"	Vulcan	The Mt. Carbon Co., Ltd.....	good...	.....
202	"	No. 1.....	Gt Kan. Colliery Co., Ltd.....	fair...	Drainage.....
203	"	Digby	Gt Kan. Colliery Co., Ltd.....	good...	.....
201	"	No. 5.....	Gt Kan. Colliery Co., Ltd.....	fair...	Drainage.....
205	"	Eagle	Gt Kan. Colliery Co., Ltd.....	fair...	Ventilation
207	"	Gauley Mountain.....	Gauley Mountain Coal Co.....	fair...	Ventilation
208	"	Gaymont.....	D. S. Cook & Son C. & C. Co.....	good...	.....
209	"	Sunnyside.....	Victoria Coal & Coke Co.....	fair...	Drainage.....
210	"	Elmo	New River Mining Co.....	fair...	Drainage.....
211	"	Michigan	Michigan Coal Co.....	good...	.....
212	"	Fayette	Low Moor Iron Co.....	good...	.....
213	"	Nuttall.....	Nuttallburg C. & C. Co.....	good...	.....
214	"	Newlyn	Newlyn C. & C. Co.....	.....	.....
215	"	Keeney's Creek.....	..... & C. Co.....	good...	.....
216	"	Brown or S. Nuttall.....	Brown Coal Co.....	fair...	Ven. & drainage...
217	"	Boone	Boone Coal & Coke Co.....	fair...	Ventilation
218	"	Ballinger No. 1.....	Ballinger Coal Co.....	fair...	Ven. & drainage...
219	"	Ballinger No. 2	Ballinger Coal Co.....	fair...	Ven. & drainage...
	"	Blume	Blume Coal & Coke Co.....	good...	.....
	"	Smokeless	Smokeless Coal Co.....	fair...	Ventilation
	"	Dubree	Rothwell Coal Co.....	fair...	Drainage.....

*Directory of Mines, Names of Coal Beds, Kinds of Ventilation,
and Total Number of all Kinds of Inside Employees,
for the Year Ending June 30, 1900.—Continued.*

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked. Name.	Thick- ness. Ft. in	Kind of Ventila- tion.	Total Inside Employees.	No.
A. M. Wolridg.	James Mullay.....	Coalburg.....	Cedar Grove	2-8.....	furn....	22	141
P. L. Brannon.	P. L. Brannon.....	East bank.....	Cedar Grove	3.....	fan....	40	147
C. A. Jewell.....	D. B. Flowery.....	Crown Hill.....	Lewiston	4.....	fan....	53	148
			Kanawha & Coalburg				
C. A. Jewell.....	Ed. Hope.....	Crown Hill.....	Lewiston & Coalburg	4 to 7.....	fan....	68	150
T. E. Embleton	P. H. Embleton.....	Crown Hill.....	Coalburg	3 to 4-3.	fan....	108	151
J. B. Lewis.....	Alex. Thompson.....	Handley.....	Kanawha	3-6to6-6	fan....	189	161
S. H. M'gomery.	Wm. Tamplin.....	Montgomery.....	Kanawha	1-8.....	nat....	34	162
S. H. M'gomery.	Wm. Tamplin.....	Montgomery.....	Kanawha	1-8.....	nat....	26	163
F. A. Sharp.....	S. R. Johnson.....	Chilton.....	Bl'k Band	3.....	furn....	33	165
M. G. Tyler.....	J. E. Armstrong.....	Spilman.....	Pittsburg	4.....	furn....	14	166
J. Icehower.....	Wm. Potts.....	Mason.....	Pittsburg	5.....	furn....	25	167
D. C. Davis.....	Henry Williams.....	Mason.....	Pittsburg	4-8.....	furn....	22	168
G. H. Gress.....	W. L. Harris.....	Mason.....	Pittsburg	4-6.....	furn....	29	169
H. F. Smith.....	Samuel Edwards.....	Hartford.....	Pittsburg	4-6.....	furn....	21	170
D. E. Newton.....	Rich Jenkins.....	Hartford.....	Pittsburg	4-6.....	fan....	23	171
H. E. Spilman.....	W. J. B. Rollins.....	Spilman.....	Pittsburg	4-6.....	fan....	69	172
H. E. Spilman.....	W. J. B. Rollins.....	Spilman.....	Pittsburg	4-6.....	furn....	43	173
W. A. Carver.....	James Carver.....	Plymouth.....	Pittsburg	6.....	fan....	140	174
E. Shonerbaum.....	Lewis Travillion.....	Raymond City	Pittsburg	5-8.....	furn....	214	175
E. Shonerbaum.....	Lewis Travillion.....	Raymond City	Pittsburg	5-8.....	furn....	176	176
F. Dixon.....	Wag Hurst.....	Longacre.....	Eagle	4-6.....	fan....	102	178
J. J. Lovell.....	Kemper Akers.....	Harewood.....	No. 2 & 5.....	5 to 6.....	furn....	42	179
F. H. Cox.....	Ed. Littlejohn.....	Boomer.....	No. 2 Gas.....	6.....	fan....	104	181
M. T. Davis.....	Geo. Fraser.....	Montgomery.....	No. 5.....	6-4.....	nat....	54	182
M. T. Davis.....	Geo. Fraser.....	Montgomery.....	No. 2.....	5.....	fan....	67	183
			Gas No. 2				
John Carver.....	John H. Tasker.....	Montgomery.....	Block No. 5.	4-6.....	fan....	130	184
J. W. Straughan	John Polder.....	Montgomery.....	Eagle No. 1	3-10.....	furn....	30	186
T. A. Bartlam.....	L. W. Waters.....	Crescent.....	Eagle No. 1.	3-4.....	fan....	30	187
T. A. Bartlam.....	James Giles.....	Crescent.....	Gas No. 2.....	5.....	fan....	44	188
T. A. Bartlam.....	J. H. Kirby.....	Crescent.....	No. 5 Block.....	6-6.....	nat....	80	189
Enoch Carver.....	John E. Carver.....	Eagle.....	Gas No. 2.....	5.....	fan....	137	190
Enoch Carver.....	John E. Carver.....	Eagle.....	No. 5.....	6-6.....	furn....	62	191
Enoch Carver.....	John E. Carver.....	Eagle.....	Eagle No. 1.	4.....	fan....	51	192
Enoch Carver.....	John E. Carver.....	Eagle.....	Eagle No. 1.	4.....	furn....	37	193
A. P. Shearer.....	Tom Lovd.....	Eagle.....	Eagle No. 2.	4.....	fan....	195	195
A. P. Shearer.....	Jos. Richardson.....	Eagle.....	Eagle No. 2.	5-6.....	fan....	130	196
T. P. Davies.....	Math Dixon.....	Eagle.....	Gas No. 2.....	4-6.....	furn....	46	197
J. F. Burdett.....	Jos. Pirrung.....	Diamond.....	Gas No. 2.....	5-6.....	fan....	95	198
D. T. Evans, G. M.	Lee Howell.....	Powellton.....	Powellton.....	4.....	nat....	27	199
D. T. Evans, G. M.	J. I. Absalom.....	Powellton.....	Powellton.....	5-10.....	fan....	149	200
W. Brown, Mgr	John Holmes.....	Mt. Carbon.....	Gas.....	3-6.....	fan....	109	202
W. Brown, Mgr	John Holmes.....	Mt. Carbon.....	Gas.....	3-6to4.....	nat....	63	203
W. Brown, Mgr	John Holmes.....	Mt. Carbon.....	No. 5 Splint	7-6.....	nat....	16	204
W. Brown, Mgr	John Holmes.....	Mt. Carbon.....	Eagle.....	3.....	nat....	4	205
Wm. N. Page.....	J. E. Ambros, J. A. Mar'in	Ansted.....	Ansted.....	4-6 to 11	fan & fan	324	207
T. A. Deitz.....	H. B. Pollock.....	Hawk's Nest.....	Sewell.....	3.....	furn....	59	208
H. H. Blackburn	Thos. Banister.....	Sunnyside.....	Sewell.....	3.....	furn....	38	209
T. C. Beury.....	Jas. C. Grissinger.....	Elmo.....	Sewell.....	3.....	fan....	53	210
Val. Bachman.....	John Seymour.....	Fayette.....	Nuttall.....	3.....	furn....	31	211
Jas. Kay.....	A. N. Pittman.....	Fayette.....	Nuttall.....	3.....	furn....	58	212
Fred R. Raven.....	Jas. W. Sims.....	Nuttallburg.....	Nuttall.....	3.....	furn....	87	213
Ed. Thomas.....	H. P. Thomas.....	Fayette.....	New River.....	3-4.....	nat....	11	214
Fred R. Raven.....	John W. Small.....	Nuttallburg.....	Nuttall.....	3-6.....	nat....	46	215
J. A. Boone.....	Philip Graef.....	Nuttallburg.....	Nuttall.....	3-9.....	furn....	74	216
W. F. Boone.....	Mike Zwilling.....	Boone.....	Nuttall.....	4.....	furn....	72	217
Geo. Holland.....	John Cheniger.....	Nuttallburg.....	Nuttall.....	3-8.....	furn....	76	218
Geo. Holland.....	W. Cheniger.....	Nuttallburg.....	Nuttall.....	3-10.....	nat....	27	219
D. W. Boone.....	Thomas Stearn.....	Lookout.....	Red Ash.....	3-9.....	furn....	78	220
J. D. Campbell.....	W. R. Hall.....	Winona.....	Nuttall.....	4.....	furn....	62	221
H. H. Rothwell.....	Chas. Higgins.....	Nuttallburg.....	Nuttall.....	3-8.....	fan....	60	222

Condition in which the Mines were found upon Inspection made for the Year Ending June 30, 1900.—Continued.

THIRD DISTRICT, EDWARD PINKNEY, INSPECTOR.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in.
223	Fayette	North Side.....	Victoria Coal & Coke Co...	fair...	Drainage.....
224	"	South side.....	Victoria Coal & Coke Co...	bad...	Vent. & drainage...
225	"	Caperton.....	Caperton Coal & Coke Co.	bad...	Ventilation.....
226	"	Cliff Top.....	Longdale Iron Co.....	good...	.....
227	"	Cumard.....	Cumard Coal Co.....	"	.....
228	"	Brooklyn.....	Brooklyn Coal Co.....	"	.....
229	"	Fire Creek.....	Fire Creek Coal & Coke Co	"	.....
230	"	Central.....	Central Coal Co.....	"	.....
232	"	Echo No. 1 and 2.....	Echo Coal & Coke Co.....	fair...	Ventilation.....
233	"	Red Ash.....	Red Ash Coal Co.....	fair...	Drainage.....
234	"	Rush Run.....	Rush Run Coal & Coke Co	good...	.....
235	"	Thurmond.....	The Thurmond Coal Co...	"	.....
236	"	Stone Cliff.....	Berry Coal & Coke Co.....	"	.....
237	"	Dimmock.....	Big Bend Coal Co.....	"	.....
238	"	Keystone & Beechwood	Beechwood Coal & Coke Co	fair...	Ventilation.....
239	"	Alaska.....	Alaska Coal & Coke Co...	bad...	Vent. & drainage...
240	"	Slate.....	Slater Coal Co.....	bad...	Ventilation.....
241	"	Harvey.....	Harvey Coal & Coke Co...	good...	.....
242	"	Red Star.....	Star Coal & Coke Co.....	"	.....
243	"	Collins.....	Collins Colliery Co.....	"	.....
245	"	Sun.....	Sun Coal & Coke Co.....	fair...	Vent. & drainage...
246	"	Derryhale.....	McKell Coal & Coke Co...	"	.....
248	"	Dunn Loop, No. 1 & 2.	Dunn Loop Coal & Coke Co	fair...	Ventilation.....
249	"	Turkey Knob.....	Turkey Knob Coal Co.....	good...	.....
250	"	Macdonald.....	Macdonald Colliery Co.....	good...	.....
251	"	Sugar Creek.....	Sugar Creek Coal & Coke Co	fair...	Vent. & drainage..
252	"	Bragg * ill Shaft.....	White Oak Colliery Co.....	"	.....
253	"	Big Q. & No. 3.....	Quinnimont Coal Co.....	good...	.....
254	"	Robins.....	Robins Coal Co.....	fair...	Vent. & drainage..
255	"	Laurel Creek.....	Laurel Creek Coal Co.....	"	Vent. & drainage..
256	"	Greenwood.....	Greenwood Coal Co.....	"	Ventilation.....
257	"	Gaston.....	Carbon Coal & Coke Co...	good...	.....
258	"	Raven No. 2.....	Raven Coal & Coke Co.....	"	.....
259	"	No. 2, A, B & C. Entries.	W. P. Rend.....	"	.....
260	"	Kaymore.....	Low Moor Iron Co.....	"	.....
262	Raleigh	Royal.....	Royal Coal & Coke Co...	bad...	Ventilation.....
263	"	Raleigh.....	Raleigh Coal & Coke Co...	"	.....
264	"	Wright.....	Wright Coal & Coke Co...	"	.....

FOURTH DISTRICT, WM. J. PREECE, INSPECTOR.

265	Mingo.....	Camp Branch.....	Camp Branch Coal & C. Co	bad...	Vent. & drainage..
266	"	Olympia.....	Olympia C. Co.....	"	.....
267	"	Freeport.....	Van Kirk Coal & Mining Co	"	.....
268	"	Maritime.....	Logan Cons. Coal Co.....	fair...	Vent. & drainage..
269	"	Red Jacket.....	Red Jacket Coal Co.....	fair...	Drainage.....
270	"	Logan.....	Logan Cons. Coal Co.....	fair...	Vent. & Drainage..
271	"	Lynn.....	Lynn Coal & Coke Co.....	bad...	Vent. & drainage..
272	"	Alma.....	Mingo Coal Mining Co.....	good...	.....
273	"	Thacker.....	Thacker Coal & Coke Co...	fair...	Ventilation.....
274	"	Grapevine.....	Grapevine Coal Co.....	fair...	Ventilation.....
275	"	Lick Fork.....	Lick Fork Coal Co.....	fair...	Ventilation.....
276	"	Pearl.....	Pearl Coal Co.....	"	.....
277	McDowell.	Tidewater.....	Tidewater Coal & Coke Co	fair...	Vent. & drainage..
278	"	Bottom Creek.....	Bottom Creek Coal & C. Co	good...	.....
279	"	Peerless.....	Peerless Coal & Coke Co...	"	.....
280	"	Empire.....	Empire Coal & Coke Co...	fair...	Vent. & drainage..
281	"	Shawnee.....	Shawnee Coal & Coke Co...	fair...	Vent. & drainage..
282	"	Eureka.....	Eureka Coal & Coke Co...	fair...	Vent. & drainage..
283	"	Pulaski.....	Pulaski Iron Co.....	good...	.....
284	"	Keystone.....	Keystone Coal & Coke Co...	fair...	Ventilation.....
285	"	Algoma.....	Algoma Coal & Coke Co...	fair...	Vent. & drainage..
287	"	Gilliam.....	Gilliam Coal & Coke Co...	good...	.....
288	"	Rolfe.....	Rolf Coal & Coke Co.....	fair...	Ventilation.....
289	"	Roanoke.....	Roanoke Coal & Coke Co...	good...	.....
290	"	Indian Ridge.....	Indian Ridge C. & C. Co...	"	.....
291	"	Arlington.....	Arlington Coal & Coke Co	fair...	Ventilation.....
292	"	Greenbrier.....	Greenbrier Coal & Coke Co	fair...	Mine dusty.....

*Directory of Mines, Names of Coal Beds, Kinds of Ventilation,
and total number of all kinds of inside employees for
the year ending June 30, 1900.—Continued.*

Name of Super- intendent	Name of Mine Boss.	Post Office.	Coal Bed Worked — Name.	Thick- ness. Ft. In.	Kind of Ven- tilation.	Total Inside Employees.	No.
H. H. Blackb'rn	James Gilbert	Caperton	Sewell	4	furn	70	223
H. H. Blackb'rn	Thos. Gosway, Sr.	Caperton	Sewell	3-10	furn	115	224
J. E. Beury	John Dempsey	Caperton	Sewell	3-8	nat	21	225
J. A. McGuffin	F. C. Tucker	Sewell	Sewell	3	f. & n.	250	226
F. Howard	Thos. Morgan	Rush Run	Sewell	4	nat	47	227
John Laing	J. M. Laing	Rush Run	Sewell	4-2	furn	72	228
G. H. Caperton	Robt. Boyde	Fire Creek	Fire Creek	3-6	n. & f.	90	229
J. R. Seal	P. J. Riley	Fire Creek	Fire Creek	3	fan	52	230
T. C. Beury	G. W. McDaniel	Beury	Fire Creek	4-4	fan	125	232
John Laing	John Long	Fire Creek	Fire Creek	5-9	fan	105	233
John Laing	Wm. Nisbet	Rush Run	Fire Creek	5	fan	120	234
G. H. Caperton	Thos. Byrd	Concho	Sewell	4-6	n. & f.	115	235
C. C. Beury	H. Phelps	Stone Cliff	Fire Creek	3-6	furn	75	236
J. C. Gilmour	J. C. Gilmour	Dimmock	Fire Creek	3 to 6	nat	60	237
C. C. Beury	Robert Hanna	Claremont	Quinnimont	4	nat	165	238
Geo. Lawton	H. C. Peters	Claremont	Fire Creek	4	fau	105	239
Jas. Kraus	Richard Seymour	Cott	Fire Creek	3-2	nat	28	240
F. E. Walker	J. A. McCallister	Bissell	Sewell	5-6	fan	235	241
Geo. W. Jones	David Evandoll	Red Star	Sewell	5-3	fan	123	242
Justus Collins	J. J. Lewis	Glen Jean	Sewell	4-6	2 fans	325	243
James Laing	James Martin	Sun	Sewell	6	fan	150	245
Thos. Nichol	Thos. Lewis	Glen Jean	Sewell	5-6	bask	10	246
F. E. Walker	E. T. Hudson	Dunn Loop	Sewell	5	furn	146	248
Ed Conknur	Clayton Conknur	Macdonald	Sewell	6	nat	125	249
S. Dixon, G. M.	V. A. Miller	Macdonald	Sewell	5-2	fan	152	250
S. Dixon, G. M.	E. J. Robertson	Macdonald	Sewell	5-6	fan	115	251
D. C. Boyce		Macdonald	Sewell			30	252
C. H. Robins	W. Hunter, Sr.	Quinnimont	Quinnimont	4-4	nat	112	253
J. A. Brown	J. A. Brown	Quinnimont	Quinnimont	3-6	nat	41	254
W. H. Brown	Wm. Crickmer	Quinnimont	Quinnimont	3-10	nat	87	255
F. Howan, G. M.	James Yowell	Leawton	Fire Creek	4	nat	275	256
David Orr	Lee Jenkins	Cannelton	No. 3 Gas	5-10	furn	47	257
Jas. Kay	J. N. Schweitzer	Arbuckle	Gas No. 2	5-6	furn	42	258
J. H. Howald	Chas. Carman	Fayette	Sewell	4-8	2 fan	35	259
P. H. Bunn	David Laing	Prince	Sewell	3-8	fan		260
W. G. Carp'nt'r	W. S. Williams	Beckley	Quinnimont	4	furn	109	262
	Ralph Henderson	Prince	No. 3	5	fan	13	263
			Fire Creek	4		11	264
W. T. Wilson	Wm. Dials	Dingess	Kittan	4-2	furn	57	265
J. W. Van Kirk	G. M. Ring	Dingess	Freeport	4-6	furn	10	266
S. T. Lambert	A. Webb	Dingess	Freeport	6	furn	32	267
S. T. Lambert	John C. Cunningham	Thacker	Thacker	4-10	furn	66	268
S. T. Lambert	R. Wilbur, L. Chaffins	Hunter	Thacker	4-8	furn	35	269
G. W. Coffey	G. W. Coffey	Hunter	Thacker	4-8	fan	150	270
J. E. Williams	W. P. Farnie	Sheprard	Thacker	4-8	furn	25	271
A. Moore	M. F. Booth	Hathfield	Thacker	3-6	furn	56	272
John Woolcock	W. F. Moore	Thacker	Thacker	5-8	furn	140	273
S. C. Fisher	S. C. Fisher	Edgerton	Thacker	11	furn	35	274
S. A. D. Mor'son	T. C. Elkins	Thacker	Mid. Kittan	7	furn	57	275
F. L. Schoew	T. N. Daugherty	Dingess	Lo. Kittan	4-6	furn	14	276
Wm. Spencer	W. H. Anderson	Vivian	Poca No. 3	5-8	fan	74	277
H. B. Wright	W. H. Devenny	Vivian	Poca, No. 3	6	fan	60	278
Wm. Doro	J. M. Shank	Vivian	Poca	5-7	fan	169	279
P. P. Flannagan	John Griffin	Landgraff	Poca No. 3	5-10	fan	65	280
L. E. Tierney	Chas. Hughes	Eckman	Poca No. 3	6-3	fau	80	281
S. F. Morris	Adam Lindley	Eckman	Poca No. 3	7-6	fan	135	282
J. K. F. Steele	John Murry	Eckman	Poca	7	fan	212	283
W. H. Thomas	W. J. Pritchard	Keystone	Poca	6	fan	80	284
P. P. Flannagan	Giles Tabor	Algoma	Poca No. 3	6-4	2 fau	176	285
Jas. E. Jones	Wm. H. Walters	Gilliam	Poca No. 3	6-4	fan	80	287
A. D. Rice	B. F. Tipton	Worth	No. 3	5-7	fan	100	288
C. Batsford	J. V. Hackworth	Worth	Poca	5-4	fan	90	289
R. H. Palmer	John Cornell	Worth	Poca No. 3	5-3	fan	70	290
Jairus Collins	J. B. Moore	McDowell	Poca	5	fan	90	291
			No. 3	6	fan	100	292

*Condition in which the Mines were found upon Inspection made
for the Year Ending June 30, 1900.—Continued.*

FOURTH DISTRICT, WILLIAM J. PREECE, INSPECTOR.

No.	County.	Name of Mine.	Name of Operator.	Condition of Mine.	Deficient in.
293	McDowell..	McDowell	McDowell Coal & Coke Co	good..	.....
294	"	Ashland	Ashland Coal & Coke Co...	good..	.....
295	"	Elk Ridge.....	Elk Ridge Coal & Coke Co	good..	.....
296	"	Lynchburg.....	Lynchburg Coal&Coke Co	fair...	Ventilation
297	"	Powhatan.....	Powhatan Coal & Coke Co	good..	.....
298	"	No. 1 & 2.....	Upland Coal & Coke Co...	fair...	Ventilation.....
299	"	Houston.....	Houston Coal & Coke Co...	good..	.....
300	"	Crozer No. 1.....	Crozer Coal & Coke Co... ..	fair...	Dusty
301	"	Crozer No. 2.....	Crozer Coal & Coke Co.....	fair...	Dusty
302	"	Turkey Gap.....	Turkey Gap Coal&Coke Co	good..	.....
303	"	Norfolk	Norfolk Coal & Coke Co...	"	.....
304	"	Lick Branch.....	Norfolk Coal & Coke Co...	"	.....
305	"	Angle.....	Norfolk Coal & Coke Co...	"	.....
306	"	Delta.....	Norfolk Coal & Coke Co ...	"	.....
307	"	Shamokin.....	Shamokin Coal & Coke Co	good..	.....
308	"	Elkhorn.....	Elkhorn Coal & Coke Co...	"	.....
309	"	Big Four.....	Big Four Coal & Coke Co...	"	.....
310	"	Tug River.....	Tug River Coal & Coke Co...	"	.....
311	"	Big Sandy.....	Big Sandy Coal & Coke Co	"	.....
312	Mercer.....	Sterling	Mill Creek Coal & Coke Co	"	.....
313	"	Coaldale.....	Coaldale Coal & Coke Co...	"	.....
314	"	Buckeye	Buckeye Coal & Coke Co...	"	.....
315	"	Caswell	Caswell Creek C. & C. Co...	"	.....
316	"	Booth-Bowen.	Booth-Bowen Coal&C. Co.	"	.....
317	"	Louisville.....	Louisville Coal & Coke Co	"	.....
318	"	Goodwill.....	Goodwill Coal & Coke Co...	"	.....
320	"	Second East.....	S-W. Va., Imp. Co.....	"	.....

*Directory of Mines, Names of Coal Beds, Kinds of Ventilation,
and Total Number of all Kinds of Inside Employees
for the Year Ending June 30, 1900.—Continued.*

Name of Superintendent.	Name of Mine Boss.	Post Office.	Coal Bed Worked. Name.	Thick-ness. Ft. In.	Kind of Ventilation.	Total Inside Employees.	No.
T. N. Cooper...	Levi Workman	McDowell.....	No. 3.....	4-6.....	fan.....	77	293
J. W. Edwards...	F. M. Cox.....	Asbland.....	Poca No. 3...	5-3.....	fan.....	110	294
L. E. Tierney...	C. A. Devenney.....	Kyle.....	Poca No. 3...	6-6.....	fan.....	105	295
L. E. Tierney...	Wm. T. Heatherman..	Kyle.....	Nelson No. 3	6.....	fan.....	127	296
L. E. Tierney...	James Heatherman...	Powhatan.....	Poca No. 3...	7-9.....	fan.....	122	297
J. J. Lincoln.....	Harper Frankenfield..	Elkhorn.....	Poca No. 3...	7-8.....	fan.....	158	298
T. E. Houston...	Benj. Lewis.....	Elkhorn.....	Poca No. 3...	8-2.....	fan.....	128	299
Sam'l Evans...	J. R. Bisby.....	Elkhorn.....	Poca.....	8.....	fan.....	311	300
Sam'l Evans...	Geo. Guy.....	Elkhorn.....	Poca No. 3...	8.....	fan.....	301	301
W. H. McQuail...	Jas. Hopkins.....	Ennis.....	Poca No. 3...	8.....	fan.....	200	302
S. M. Buck.....	J. W. Devenny.....	Maybeury.....	No. 3.....	9.....	fan.....	115	303
S. M. Buck.....	Jas. Dewees.....	Maybeury.....	Poca.....	8-6.....	fan.....	90	304
S. M. Buck.....	W. F. Whitt.....	Maybeury.....	Poca.....	7 to 9...	fan.....	57	305
S. M. Buck.....	.....	Maybeury.....	Poca.....	.....	.....	.....	306
J. A. Cardwell...	E. M. Stephens.....	Maybeury.....	Poca.....	8-4.....	fan.....	110	307
J. E. Barlow...	Thos. Barrett.....	Maybeury.....	No. 3.....	7-3.....	fan.....	150	308
W. A. Lindsey...	William Cook.....	Bluefield.....	No. 4.....	4.....	.....	.....	309
Mark Parkard...	.....	Davy.....	No. 7.....	3-9.....	.....	.....	310
Wm. Griffiths...	.....	Hallsville.....	No. 7.....	3-9.....	.....	.....	311
T. H. Cooper...	I. L. Martin.....	Coopers.....	Poca.....	8.....	fan.....	145	312
T. H. Cooper...	Thos. Williams.....	Coaldale.....	Poca No. 3...	9.....	fan.....	195	313
J. D. Hewett...	Thos. Gent.....	Bramwell.....	Poca No. 3...	5-6.....	fan.....	80	314
Jenkins Jones...	M. Gilmore.....	Bramwell.....	No. 3.....	8.....	2 fans...	260	315
J. P. Bowen.....	J. H. Fickel.....	Bramwell.....	No. 3.....	6 to 9...	fan.....	171	316
Jarius Collins...	M. J. Saunders.....	Goodwill.....	Poca No. 3...	5-6.....	fan.....	82	317
Ph. Goodwill...	John Moody.....	Goodwill.....	Poca No. 3...	4-8.....	fan.....	65	318
Walt. O'Malley	Frank Tabor.....	Pocahontas, Va	Poca No. 3...	9.....	fan.....	10	320

CHAPTER XVI.

During the year the coal operators were interrogated as to what, in their judgment, was needed by way of additional legislation. To this inquiry many replies were received, and they are here tabulated for the information contained.

Summary of Legislation suggested 1900.

COUNTY.	No. of Operators Reporting.	No. Recommending Legislation	No. Adverse to Legislation.	No. Recommending examination of		No. Adverse to Examination of	
				Mine Boss.	Fire Boss.	Mine Boss.	Fire Boss.
Barbour.....	4	1	2	3	2	1	1
Harrison.....	5	1	1	2	2	3	3
Marion.....	6	2	2	4	4	1	1
Marshall..	1	.....	1	.....	.....	1	1
Mineral.....	2	.....	2	.....	.....	2	2
Ohio.....	2	1	1	.....	.....	1	1
Preston.....	4	.....	1	4	4	.....	.....
Taylor.....	1	.....	.....	1	1	.....	.....
Tucker.....	3	.....	1	2	2	1	1
Randolph.....	3	.....	3	2	2	.....	.....
Kanawha.....	17	1	8	9	9	5	4
Mason.....	5	.....	4	4	4	1	1
Putnam.....	1	.....	.....	1	1	.....	.....
Fayette.....	29	2	14	16	18	12	10
Raleigh.....	3	.....	.....	2	2	.....	.....
Mingo.....	6	2	1	3	3	3	3
McDowell.....	19	3	10	9	10	7	6
Mercer.....	5	.....	1	4	4	1	1
Totals.....	118	13	52	67	69	39	35

Legislation Needed.—June 30, 1900.

Mine.	Name of Superintendent.	Do we need legislation		Should Bosses be Examined.		Upon what points is legislation needed?	Remarks.
		Yes	No	Mine Boss	Fire Boss		
Junior No. 1.....	John F. Davis, Mgr.....	Yes		yes			Cannot say as to fire bosses, as we have none.
Kelly.....	J. E. Reed.....	no		yes	yes		
Arden.....	S. W. Shrader.....			yes			
Arden (L. Cr. C. O.).....	W. G. Brydon.....			no	no		
F. R. M. (J. C. & Co.).....	R. W. Affleck.....	no		no			Abolition of Company stores. Mine Inspectors to see that mine cars are branded as to capacity in bus. or if paid by ton. that weights are correct.
Fall Run No. 2.....	John H. Clifford.....			no	no		
Glen Falls.....	J. F. Jones.....			no	no		
Despard No. 2.....	Mord Lewis.....	yes		yes	yes		
Solon Lowery.....	David Brown.....			yes	yes		Not necessary to examine bosses if Mine Inspectors visit a mine once every three months.
Gaston.....	S. L. Watson.....	no		no			
King.....	R. M. Hite.....	no		no	no		
Monongah 2, 3 & 5.....	A. J. Ruckman.....	yes		yes	yes	Mine bosses should hold State certificate and be State officials.	Bosses do not need to be examined in our locality.
Pennosis.....	D. B. Brooks.....			yes	yes		
Highland.....	J. H. Wheelwright.....	yes		yes	yes		
Palatine.....	M. D. Orr.....			yes	yes		
Monnds ville.....	John W. Berry.....	no		no	no		Absolute protection to mines and miners from gas, salt water, oil and gas wells and especially from dry holes or dusters.
Savage.....	O. Tibbets.....	no		no	no		
Elk Garden.....	W. T. Blackiston.....			no	no		
Richland.....	John P. Gitchrist.....	no		no	no		
Elm Grove.....	J. B. Chambers.....	yes					Examinations necessary for new bosses.
Gorman No. 1.....	William Ramsay.....			yes	yes		
South Side No. 2 & 3.....	W. W. Eaton.....			yes	yes		
Irona.....	Fred C. Todd.....			yes	yes		
Oakland.....	R. I. Anderson.....	no		yes	yes		
Grafton.....	John W. Fahey.....			yes	yes		

Legislation Needed June 30, 1900.—Continued.

Mine.	Name of Superintendent.	Do we need legislation?		Should Bosses be Examined.		Upon what points is legislation needed?	Remarks.
		Yes	No.	Mine Boss.	Fire Boss.		
Douglas	J. B. Jenkins.....		no.	yes....	yes....		Acres of coal are lost and mines made more dangerous by reason of inaccurate surveys.
Thomas Shaft.....	Lee Ott.....		yes....	yes....	yes....		
Coketen No. 1.....	J. C. Brydon.....		no.	no.	no.		
Randolph.....	F. P. Rease.....		no.	yes....	yes....		
Harding No. 1.....	A. C. Finley.....		no.	no.	no.		
Letter.....	F. P. Rease.....		no.	yes....	yes....		
Graham Mines.....	W. W. Graham.....		yes....	yes....	yes....		
Spring Fork.....	J. E. Dana.....		no.	no.	no.		
Black Diamond.....	Arthur Robinson.....	yes.		no.	no.	Mine surveyors.....	
Quincy.....	Wm. Dickinson.....		no.	yes....	yes....		
Monarch.....	R. L. Slack.....		no.	no.	no.		Not necessary for bosses to be examined in Kanawha. Have had no experience with fire bosses. Not necessary for bosses to be examined in this section. If competency can be proved by examination—yes.
Virginia.....	Henry Davis.....		yes....	yes....	yes....		
B No. 4.....	J. W. Dawson, G. M.....		no.	no.	no.		
Cedar Grove.....	J. D. Harris.....		no.	yes....	yes....		
No. 2 Gas.....	Langdon Lea.....		no.	yes....	yes....		
South.....	R. B. Cassidy.....		yes....	yes....	yes....		
Roula.....	J. W. Moore.....		no.	yes....	yes....		
No. 4.....	A. M. Wooldridge.....		no.	yes....	yes....		
East Bank.....	P. L. Brannen.....		yes....	yes....	yes....		
Black Cat.....	C. A. Jewell.....		yes....	yes....	yes....		
Lewiston & Coalb'g.....	T. E. Emberton.....		no.	no.	no.		
Consolidated.....	S. H. Montgomery.....		no.	no.	no.		
Rose Dale.....	F. A. Sharpe.....		no.	no.	no.		
Camden.....	M. G. Tyler.....		no.	yes....	yes....		
Hope.....	D. C. Davis.....		no.	yes....	yes....		
Mason.....	G. H. Gross.....		yes....	yes....	yes....		
Liverpool.....	H. F. Smith.....		no.	no.	no.		
New Haven.....	H. E. Spilman.....		no.	yes....	yes....		
Plymouth.....	W. A. Carver.....		yes....	yes....	yes....		
Longacre No. 1 & 2.....	F. Dixon.....		no.	yes....	yes....		

Legislation Needed June 30, 1900.—Continued.

Mine.	Name of Superintendent.	Do we need legislation.		Should Bosses be Examined.		Upon What Points is Legislation Needed	Remarks.
		Yes	No.	Mine Boss.	Fire Boss.		
No. 2 & 5.	J. J. Lovell.		no.	no.	no.		
Boomer.	Edw. Coxé		no.	no.	no.		
Diamond.	J. F. Burdette.		no.	yes.	yes.		
Vulcan.	D. T. Evans, G. M.		yes.	no.	no.	One prohibiting the use of "Black," or lubricating oils in mines.	Not necessary for bosses for non-gaseous mines to be examined
Gauley Mt.	Wm. N. Page.		yes.	yes.	yes.	Upon qualification of underground bosses.	
Gaymont.	F. A. Deltz.			yes.	yes.		
Fayette.	Jas. Kay.			yes.	yes.		
Nuttall.	Fred R. Raven.		no.	yes.	yes.		
Newlyn.	Edward Thomas.			no.	no.		Not necessary for bosses to be examined on north side of New river.
Boone.	W. F. Boone.		no.	no.	no.		
Blaine.	D. W. Boone.			yes.	yes.		Provided verbal answers could be given same as written ones.
Dubree.	H. H. Rotnwell.			yes.	yes.		
North Side.	H. H. Blackburn.				yes.		
Cliff Top.	J. A. McGuffin.			no.			Any mine boss who has had charge of mine for 10 years should be thoroughly competent without any examination.
							It could do no harm for bosses to be examined.
Fire Creek.	G. H. Caperton.		no.				
Central.	J. R. Seal.		no.	yes.	yes.		
Red Ash.	John Laing.			yes.	yes.		
Stone Cliff.	C. C. Beury.		no.	no.	no.		
Dimmock.	J. C. Gilmour.			yes.	yes.		
Slater.	Jas. Kraus.			yes.	yes.		
Collins.	Justus Collins.			yes.	yes.		
Sun.	James Lang.		no.	no.	no.		
Dunn Loop.	F. E. Walker.			yes.	yes.		
Macdonald.	Samuel Dixon, G. M.			yes.	yes.		
Big Q & No. 3.	D. C. Boyce.		no.	yes.	yes.		Yes, if done by competent persons.
Greenwood.	W. A. Brown.		no.	no.	yes.		

Mine.	Name of Superintendent.	Do we need legislation?	Should Bosses be Examined.		Upon what points is legislation needed?	Remarks.
			Yes	No.		
Raven No. 2.....	F. Howan, G. M.....					
No. 2.....	W. P. Rend.....					Think this should be left to judgment and discretion of operators and superintendents. See letter.
Royal No. 1, 2 & 3.....	John H. Howald.....	no.				
Wright.....	P. H. Bunn.....	no.				
	W. Gaston Caperton.....	yes.			See special report.....	
		yes.				
Olympia.....	J. B. Killinger.....					
Freeport.....	J. W. Van Kirk.....	yes.			To compel railroads to use all mines the same according to output.....	It would be a great help if we could adopt the Pennsylvania mine law on this point—(examining bosses).
Mingo.....	John E. Williams.....	yes.			To compel miner to use a better grade of miner's oil in mine—should be inspected by mine inspector as in Ohio.....	
		yes.				
Grapevine.....	John Woolcock.....					
Lick Fork.....	G. C. Fisher.....					
Pearl.....	S. A. D. Morrison.....	no.				
Tidewater.....	F. L. Schoew.....					
		yes.				Examination pertaining to practical mining in all its branches.
Bottom Creek.....	William Spencer.....	no.				
Peetless.....	H. B. Wright.....	no.				If Fire Bosses could be examined by board of examiners free from politics.
Empire.....	Wm. D. Ord.....	no.				
Shawnee.....	P. P. Flanagan.....	no.				
Pulaski.....	S. F. Morris.....	yes.			Under present laws it is too easy for an incompetent man to be mine foreman.	
Gilliam.....	P. P. Flanagan.....	no.				
Roanoke.....	A. D. Rice.....	no.				
Indian Ridge.....	C. Botsford.....					
Arlington.....	R. H. Palmer.....					
Greenbrier.....	Jarius Collins.....	no.			The tax on acreage be reduced in proportion as the acreage is reduced by mining.	
McDowell.....	T. N. Cooper.....	no.				
		yes.				

Legislation Needed June 30, 1900.—Continued.

Mine.	Name of Superintendent.	Do we need legislation.		Should Bosses be examined.		Upon What Points is Legislation Needed.	Remarks.
		No.	No.	Mine Boss.	Fire Boss		
Ashland.....	J. W. Edwards.....	yes	no	no	no	See special report	
Powhatan.....	L. E. Tierney.....	yes	no	yes	yes		
Upland No. 1 & 2.....	John J. Lincoln.....	yes	no	yes	yes		
Houston.....	T. E. Houston.....	yes	no	yes	yes		
Crozer No. 1 & 2.....	Samuel Evans.....	yes	no	yes	yes		
Shamokin.....	J. A. Cardwell.....	yes	no	yes	yes		
Elkhorn.....	J. E. Barlow.....	yes	no	yes	yes	Miners and mine labors should be compelled to abandon the use of kerosene oil for lighting purposes.	
Sterling.....	T. H. Cooper.....	yes	no	yes	yes		
Buckeye.....	John D. Hewitt.....	yes	no	yes	yes		
Louisville.....	Jarvis Collins.....	yes	no	no	no		
Goodwill.....	Philip Goodwill.....	yes	no	yes	yes		
2nd East.....	Walter O'Malley.....	yes	no	yes	yes		

Name of Mine: Powhatan.

Name of Superintendent: L. E. Tierney.

In your judgment do we need any mine legislation? Yes.

If so upon what points? First of all examinations by a Board appointed by the Governor, of all Mine Inspectors, the Board to be selected not on account of politics, but fitness, and should consist of two coal operators, two coal miners and a practical mining engineer, and applicant standing highest in merit as to theory and practice be appointed. By practice I mean that a candidate for Mine Inspector should have 5 years practical experience as a coal miner, and that each appointee as Mine Inspector have his appointment confirmed by the Circuit Judge in the Judicial District for which he is appointed. Each should be a citizen of the United States, and a resident of this State. I would have the Chief Inspector appointed direct by the Governor, as he must necessarily be a broader man and I don't think among the miners of this State we have calibre to fill that place.

Do you recommend that Mine bosses and Fire bosses be required to undergo a State examination to prove their competency? I would be in favor of a law that any Mine boss or Fire Boss now in that occupation and who has been bossing for 3 years and who has 3 years experience as a practical miner should be given a certificate of competency on verification of the above Board, all others should be examined and not given a certificate unless they had 3 years experience and pass examination on the hard or soft coal of the United States. (I would make the examining Board the Mine Inspectors of the State of West Virginia.)

Name of Mine: Peerless.

Name of Superintendent: H. B. Wright.

In your judgment do we need any mine legislation? No.

If so upon what points? Under present laws, the State says that Mine Boss shall be of certain experience and defines his duties; states under what conditions mines shall be worked in order to protect life and property. What more is needed? Why legislate for the details of a business, which of right should be left to the judgment of the parties interested?

Do you recommend that Mine bosses and Fire bosses be required to undergo a State examination to prove their competency? Competency of Mine boss already provided for. Would recommend that Fire Boss be also provided for if this could be done by a board of examiners that would be free from politics, otherwise would prefer to have office of Fire Boss open to all men whose experience proves their competency.

Mr. W. P. Rend, an owner of large mining properties in the States of Pennsylvania, Ohio, Illinois and West Virginia, says, on the subject of requiring mine bosses and fire bosses to undergo examination, "most emphatically no. Practical experience in

coal mining is of far greater importance than theoretical learning or the ability to answer such questions as are propounded in text books. Some of the best pit bosses I have had in my employ, have been men of limited education, who could not pass a theoretical examination.

"In the State of Ohio, (where certificates are not required), I have been operating several mines, and have for many years been able to get more capable and better pit bosses than in Pennsylvania, where I was only permitted to employ men who had passed the examination.

"Such a law would debar ninety-nine miners out of a hundred from the opportunities of filling a position that should be open to all. It seems to me that if the State appoints competent and efficient inspectors of mines, who will make examinations frequently, and require the pit bosses and fire bosses to strictly carry out their instructions, and further demand of the operators that fans of sufficient capacity be used to secure a good flow of air in all of the working places, all will then have been done that should be attempted by legislation."

MINING LAWS

—OF THE—

STATE OF WEST VIRGINIA.

IN FORCE DECEMBER

1900.

MINING LAWS.

(Acts 1897, chapter 59.)

Sec. 1. The governor of the State, by and with the consent of the Senate, shall appoint one mine inspector for each of the four mining districts created by this act, and a chief mine inspector, who shall supervise and control the mine inspection of the State of West Virginia, and the chief shall have the power to call the assistance of any one of the other four mine inspectors to any district in the State of West Virginia in case of emergency. And shall keep the reports furnished him by the four mine inspectors, and in addition thereto he shall copy said reports in a book or books by him purchased and kept for the purpose, and he shall index the same, and said books shall be open for inspection upon the request of any citizen of the State, and upon the request of the Governor or Attorney General of this State, said chief mine inspector shall lay said books and reports before either of said officers, and also maps of mines furnished him by said mine inspectors.

Any chief mine inspector who shall violate any of the provisions of this act, shall, upon conviction thereof, be fined not less than twenty-five nor more than two hundred dollars, and may, in the discretion of the court, be imprisoned in the county jail not exceeding one year.

And each of the four mine inspectors shall report in writing monthly to the chief inspector, the number and condition of all the mines inspected by him during each month. The chief inspector shall have power to remove any of the four mine inspectors mentioned in this act for causes heretofore mentioned in this act, and the Governor of the State shall fill all vacancies caused by removal from office.

Mine inspectors created by this act shall hold their office for the term of four years, as hereinafter provided, unless they be sooner removed, as hereinafter provided. They shall continue in office until their successors in office are appointed and qualified.

Every person so appointed must be a citizen of West Virginia,

having a practical knowledge of mining and properly ventilating and draining mines, and must be a coal miner of at least six years experience as a miner in the coal mines, and he shall not, while in office, be interested as owner, operator, agent, stockholder, superintendent or engineer of any coal mine, and he shall be of good moral character and temperate habits. An inspector of mines shall be removed from office by the chief mine inspector of this State for incompetency, neglect of duty, drunkenness, malfeasance and for other good causes.

Sec. 2. Vacancies in office of inspectors shall be filled by appointment by the Governor of the State for the unexpired term.

Every person appointed inspector of mines shall, before entering upon the discharge of the duties of his office, take the oath before some person authorized by law to administer oaths, that he will support the constitution of the United States and the constitution of the State of West Virginia, and that he will faithfully and impartially, to the best of his ability, discharge the duties of his office and file a certificate of his having done so in the office of the Secretary of State, and he shall give a bond in the penalty of two thousand dollars, with sureties to be approved by the Governor of the State, conditioned that he will faithfully discharge the duties of his office.

The salary of the chief inspector shall be twelve hundred dollars per annum and not more than three hundred dollars for expenses, and the other four mine inspectors shall have one thousand dollars salary, each, per annum, and not more than three hundred dollars for expenses. Such salary and expenses shall be paid monthly out of the State Treasury; *Provided*, That before payment of traveling expenses shall be made to the inspector, he shall file an account of such expenses and make out and file with the auditor that they were accrued in the discharge of his official duties.

On the first Tuesday in April, one thousand eight hundred and ninety-seven, and every four years thereafter, the Governor of the State shall, with the consent of the Senate, appoint one mine inspector for each of the four mining districts of the State created by this act, whose term of office shall begin when he has taken the oath of office and has given the approved bond, as required by this act, and whose term of office shall be four years, or until his successor shall be duly appointed and qualified.

Sec. 3. And it shall be his duty to visit each mine in his district at least once in every three months, and it shall be unlawful for any mine inspector to do any surveying for any mine owner or owners, during his term of office, and it shall be unlawful for any mine inspector to appoint any deputy or other person to do and perform any work required of such mine inspector, and it shall be his duty to personally perform the duties of his office hereunder.

Any mine inspector failing to comply with the requirements of this act, shall be guilty of a misdemeanor and upon conviction thereof shall be fined not less than one hundred dollars nor more than five hundred dollars, and be dismissed from office.

The Governor of the State of West Virginia, together with the chief mine inspector created by this act, shall divide the State of West Virginia into four mining districts.

Duties of Mine Inspectors.

(Acts 1890, ch. 9.)

Sec. 4. Each inspector shall examine the mines of his district at least twice every year* and oftener if called upon by twenty miners engaged in any one mine, and he shall see that all the provisions of this act are observed and strictly carried out. He shall particularly examine into the condition of the mines as to ventilation, drainage and general safety and shall make a record of all such examinations. † He shall also for each year ending with the thirtieth day of June, make a written report to the Governor of his proceedings as such inspector, stating therein the number of mines in his district, the thickness of the seams mined, the number of miners employed in each mine, the condition in which the mines were found, the extent to which this act is obeyed or violated, the number of accidents and deaths resulting from injuries received in or about the mines, with the cause of each of such accidents and deaths, and such other information in relation to mines and mining as he may deem of public interest. He shall also suggest or recommend such legislation on the subject of mining as he may think necessary. Such report shall be filed with the Governor on or before the thirtieth day of December next succeeding the year for which it was made.

Operators to Make Surveys and Maps of Mines.

(Acts 1887, ch. 50.)

Sec. 5. The operator or agent of every coal mine shall, within six months after the passage of this act, make or cause to be made, an accurate map or plan of such mine, on a scale to be stated thereon, not exceeding one hundred feet to the inch. Such map or plan shall show the openings or excavations, the shafts, slopes, entries, air ways, headings, rooms, pillars, etc., the general inclination of the coal strata, and so much of the property lines and of the outcrop of the coal seam of the tract

*Acts 1897, ch. 59, sec. 3, requires Inspector to visit mines in his district at least once in every three months.

†Sec. 1, Acts 1897, chap. 59, devolves this duty upon the Chief Mine Inspector who shall, upon the request of the Governor or Attorney General, lay said books and reports before either of said officers.

of land on which said mine is located, as may be within one thousand feet of any part of the workings of such mine.

A true copy of such map or plan, shall, within the six months aforesaid, be delivered by such operator, to the inspector of his district, to be preserved among the records of his office and turned over to his successor in office; and the original map, or a true copy thereof, shall be kept by such operator at the office of the mine, and open at all reasonable times for the examination and use of the inspector and such operator shall twice within every twelve months, and not more than seven months apart while the mine is in operation, cause such mine to be surveyed and the map thereof extended so as to accurately show the progress of the workings, the property lines and outcrop as above provided; and he shall immediately thereafter deliver, to the inspector of his district, a map or plan and statement of the progress of the workings and extensions aforesaid, so as to enable the inspector to trace the same on the map or plan furnished him as above required.

Before any mine or part of a mine is abandoned, or the pillars drawn therein, it shall be accurately surveyed, and the maps thereof extended as aforesaid, and within one month after any mine is abandoned, the person who was the last operator thereof, shall file with the clerk of the county court of the county in which the mine is located, a correct map, showing all the excavations of such mine, to be preserved as a part of the records of the county.

If any operator fail to comply with any provision of this section, the inspector is hereby authorized to have the survey and maps made or extended, as may be necessary in such case, at the expense of such operator, and the reasonable fees and expenses may be recovered in any court of competent jurisdiction by the person performing the work.

When Not Lawful to Allow Persons to Work in Mines.

Sec. 6. After six months from and after the passage of this act, it shall be unlawful for the operator or agent of any coal mine, to employ any persons at work in said mine, or permit any persons to be in said mine for the purpose of working therein, unless they are in communication with at least two openings, or outlets, separated by natural strata, of not less than one hundred feet in breadth, if the mine be worked by shaft, and of not less than fifty feet in breadth, if worked by slope or drift. To each of said outlets there shall be provided, from the interior of the mine, a safe and available roadway, which shall at all times while the mine is in operation, be kept free from all obstruction that might prevent travel thereon in case of an emergency, and if either of said outlets be by shaft, it shall be fitted with safe and available appliances, such as ladders, stairs, or

hoisting machinery, which shall at all times, when the mine is in operation, be kept in order and ready for immediate use, whereby persons employed in the mine may readily escape in case of an accident.

This section shall not apply to any mine while work is being prosecuted with reasonable diligence in making communication between said outlets so long as not more than twenty persons are employed at any one time in said mine; neither shall it apply to any mine, or part of a mine, in which the second outlet has been rendered unavailable by reason of the final robbing of pillars preparatory to abandonment, so long as not more than twenty persons are employed therein at any one time.

When Owner of Mine May Appropriate Adjoining Lands.

Sec. 7. In case a coal mine has but one opening, and the owner thereof does not own suitable service ground for another opening, as required by the next preceding section, he may select and appropriate any adjoining land for that purpose, and for approach thereto, and he shall be governed in his proceeding in appropriating such land, by the laws in force providing for the appropriation of private property by corporations, and such appropriation may be made whether he is a corporator or not; but no lands shall be appropriated under the provisions of this act until the court is satisfied that suitable premises cannot be obtained on reasonable terms.

Certain Safety Appliances to be Provided.

Sec. 8. The operator or agent of every coal mine worked by shaft shall forthwith provide, and hereafter maintain, a metal tube from the top to the bottom of such shaft, suitably adapted to the free passage of sound, through which conversation may be held between persons at the top and at the bottom of the shaft, also the ordinary means of signaling, and an approved safety catch and a sufficient cover overhead on every carriage used for lowering or hoisting persons, and at the top of the shaft an approved safety gate, and an adequate brake on the drum of every machine used to lower or hoist persons in such shaft; and the said operator or agent shall have the machinery used for lowering or hoisting persons into or out of the mine kept in safe condition and inspected once in each twenty-four hours by some competent person.

Machinery to be in Charge of Competent and Sober Engineers.

Sec. 9. No operator or agent of any coal mine, worked by shaft or slope, shall place in charge of any engine, used for lowering into or hoisting out of said mine persons employed

therein, any but competent and sober engineers; and no engineer in charge of such machinery shall allow any person except such as may be deputed for that purpose by the operator or agent, to interfere with any part of the machinery; and no person shall interfere with or intimidate the engineer in the discharge of his duties; and in no case shall more than ten persons ride on any cage or car at one time, and no person shall ride on a loaded cage or car in any shaft or slope.

All slopes or engine-planes, used as traveling-ways by persons in any mine, shall be made of sufficient width to permit persons to pass moving cars with safety, or refuge holes of ample dimensions, and not more than sixty-feet apart, shall be made on one side of said slope or engine plane. Such refuge holes shall be kept free from obstructions, and the roof and sides thereof shall be made secure.

Provisions for Proper Ventilation of Mines.

Sec. 10. The operator or agent of every coal mine, whether worked by shaft, slope or drift, shall provide and hereafter maintain for every such mine, ample means of ventilation, affording not less than one hundred cubic feet of air per minute for each and every person employed in such mine, and as much more as the circumstances may require, which shall be circulated around the main headings and cross headings and working places, to an extent that will dilute, render harmless and carry off the noxious and dangerous gasses generated therein; and as the working places shall advance, break-throughs for air shall be made in the pillars, or brattices shall be used, so as to keep such working places well and properly ventilated.

Precautions to be Used in Case of Fire Damp.

All mines generating fire damp shall be kept free of standing gas in the worked out or abandoned parts of the same as far as practicable, and the entrance thereto shall be properly closed and cautionary notices posted to warn persons of danger, and the doors used therein for directing ventilation shall be so hung as to close themselves, and every working place and all other places where gas is known to exist or is liable to exist, shall be carefully examined by some competent person appointed for that purpose, to be known as "fire-boss," immediately before each shift, with a safety lamp, and in making such examinations it shall be the duty of the fire-boss at each examination, to leave at the face of every place so examined, evidence of his presence, and no workman shall enter or be permitted to enter, any mine or part of a mine, generating fire damp, until it has been examined by the fire-boss as aforesaid and reported by him to be safe. In all mines generating fire damp accumulations of

fine, dry, coal dust shall as far as practicable, be prevented and such dust shall, whenever necessary, be kept properly watered down. The safety lamps used for examining any mine, or which may be used for working therein, shall be furnished by and be the property of the operator of the mine, and shall be in charge of an agent thereof, and at least one safety lamp shall be kept at every coal mine, whether such mine generates fire damp or not.

Mining Boss to be Appointed—His Qualifications and Duties.

Sec. 11. In order to better secure the proper ventilation of every coal mine and promote the health and safety of persons employed therein, the operator or agent shall employ a competent and practical inside overseer, to be called "mining-boss," who shall be a citizen and an experienced coal miner, or any person having two years' experience in a coal mine, and shall keep a careful watch over the ventilating apparatus and the air-ways, traveling-ways, pumps and drainage, and shall see that as the miners advance their excavations, proper break-throughs are made as provided in section ten of this act, and that all loose coal, slate and rock overhead in the working places, and along the haulways, be removed or carefully secured so as to prevent danger to persons employed in such mines; and that sufficient props, caps and timbers are furnished of suitable size and cut square at both ends, and as near as practicable to the proper length for the places where they are to be used, and such props, caps and timbers shall be delivered and placed in the working places of the miners, and every workman in want of props or timbers and cap pieces, shall notify the mining boss or his assistant of the fact at least one day in advance, giving the length and number of props and timbers and cap pieces required; but in case of an emergency the timbers may be ordered immediately upon the discovery of any danger; and the place and manner of leaving the orders for timbers shall be designated in the rules of the mine; and shall have all water drained or hauled out of the working places before the miners enter, and the working places kept dry, as far as practicable, while the miners are at work. On all haul-ways, space not less than ten feet long and two feet six inches wide between the wagon and the rib, shall be kept open at distances not exceeding one hundred feet apart, in which shelter from passing wagons may be secured. It shall further be the duty of the mining boss to have bore-holes kept not less than twelve feet in advance of the face, and, when necessary, on the sides of the working places that are being driven towards and in dangerous proximity to an abandoned mine or part of a mine suspected of containing inflammable gasses or which is filled with water.

The mining-boss, or his assistants shall visit and examine

every working place in the mine at least once in every three days, and oftener when necessary, while the miners of such places are at work, and shall direct that each and every working place shall be secured by props or timbers whenever necessary, so that safety in all respects be assured, and no person shall be directed to work in an unsafe place, unless it be for the purpose of making it safe. The mining-boss shall notify the operator or agent of the mine of his inability to comply with any requirements of this section; it shall then become the duty of such operator or agent at once to attend to the matter complained of by the mining-boss, to comply with the provisions hereof.

Duty of Mine Inspector When Mine is in Unsafe Condition.

Sec. 12. The operator or agent of every coal mine shall furnish the inspector proper facilities for entering such mines, and making examinations or obtaining information; and if any inspector shall discover that any mine does not in its appliances, for the safety of the persons employed therein, conform to the provisions of this act, or that by reason of any defect or practice in or at such mine, the lives or health of persons employed therein, are endangered, he shall immediately, in writing, notify such operator or agent thereof, stating in such notice the particulars in which he considers such mine to be defective or dangerous, and if he deem it necessary for the protection of the lives or health of the persons employed in such mine, he shall, after giving notice to the said operator or agent, of his intention so to do, apply without bond, to the circuit court of the county in which said mine is located, or to the judge thereof in vacation, for an injunction to restrain the operating of said mine until said danger is removed; and such court or judge, when so applied to, shall at once proceed to hear the case and determine the same, and if the cause appear to be sufficient, and such danger appear to exist, after hearing the parties and their evidence, he shall issue an injunction restraining the operating of said mine until the cause of such danger be removed, and the cost of the proceedings, including the charges of the attorney prosecuting the same, shall be borne by the operator of the mine, but no fee exceeding twenty-five dollars shall be taxed in any one case for the attorney prosecuting such case; but if said court or judge shall find the cause not sufficient, then the case shall be dismissed and the cost shall be paid by the county in which the mine is located.

Boys Under Twelve Years and Female Persons not to be Employed in Mines.

Sec. 13. No boy under twelve years of age, nor female per-

sons of any age, shall be permitted to work in any coal mine, and in all cases of doubt, the parents or guardians of such boys shall furnish affidavits of their ages.

Employes not to do any Act that Endangers Life or Property.

(Acts 1890, ch. 9.)

Sec. 14. No miner, workman or other person shall knowingly injure any shaft, lamp, instrument, air course or brattice, or obstruct or throw open air-ways, or carry matches or open lights into places worked by safety lamps, or disturb any part of the machinery, open a door used for directing ventilation and not close it again, or enter any part of a mine against caution, or disobey any order given in carrying out any of the provisions of this act, or do any other act whereby the life or health of any person employed in the mines or the security of the mine is endangered.

Intimidation of Employes Prohibited.

Nor shall any person or persons, or combination of persons, by force, threats, menace or intimidation of any kind, prevent or attempt to prevent from working in or about any mine, any person or persons who have the lawful right to work in or about the same, and who desire so to work; but this provision shall not be so construed as to prevent any two or more persons from associating themselves together under the name of Knights of Labor, or any other name they may desire, for any lawful purpose, or for using moral suasion or lawful argument to induce any one not to work in and about any mine.

Powers and Duties of Mine Inspector in Case of Explosion or Accident.

Sec. 15. Whenever by reason of any explosion or other accident in any coal mine, or the machinery connected therewith, loss of life or serious personal injury shall occur, it shall be the duty of the superintendent of the colliery, and in his absence the mining-boss in charge of the mine, to give notice thereof forthwith, by mail or otherwise, to the inspector of the district, stating the particulars of such accident. And if any one is killed thereby, to the coroner of the county also or in his absence or inability to act, to any justice of the peace; and the said inspector shall, if he deem it necessary from the facts reported, immediately go to the scene of such accident and make such suggestions and render such assistance as he may deem necessary for the future safety of the men and investigate the cause of such explosion or accident, and make a record thereof, which he shall preserve with the other records of his office; and to enable him to make such investigation, he shall have the power

to compel the attendance of witnesses, and to administer oaths or affirmations; and the cost of such investigation shall be paid by the county in which such accident occurred, in the same manner as the costs of coroner's inquests are now paid. If the coroner or justice shall determine to hold an inquest upon the body of any person killed, as aforesaid, he shall impanel a jury, no one of whom shall be directly or indirectly interested, and the inspector of mines, if present at such inquests, shall have the right to appear and testify and to offer any testimony that may be relevant, and to question and cross question any witness; and the coroner or justice shall deliver to the inspector a copy of the testimony and verdict of the jury.

Operators to Make Annual Reports to Inspector of Mines.

Sec. 16. The operator or agent of every coal mine shall annually, during the month of July, mail or deliver to the inspector of his district a report for the preceding twelve months, ending with the thirtieth day of June. Such report shall state the names of the operator and officers of the mine, the quantity of coal mined, and such other information, not of a private nature, as may from time to time be required by the inspector. Blank forms of such reports shall be furnished by the inspector.

Penalty for Violations of Law.

Sec. 17. The operator or agent of any coal mine who shall wilfully neglect or refuse to perform the duties required of him by any section of this act, or who shall violate any of the provisions hereof, and any person who shall neglect or refuse to perform the duties required of him by sections nine, ten, eleven, thirteen or fourteen, or who shall violate any of the provisions thereof, or knowingly do any act whereby the health or life of any person employed in a mine, or the security of a mine is endangered, shall be guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than fifty nor more than five hundred dollars. In default of payment of such fine and costs, for the space of ten days, the defendant may, in the discretion of the court, be imprisoned in the county jail for a period not exceeding three months.

To What Mines Law Applies.

Sec. 18. The provisions of this act shall apply only to coal mines in which ten or more persons are employed in a period of twenty-four hours.

Sec. 19. Chapter seventy, of the acts of one thousand eight hundred and eighty-three, and all other acts and parts of acts inconsistent with this act, are hereby repealed.

INDEX.

Part I for year 1898.

Part II for year 1899.

Part III for year 1900.

A

	Part.	I	II	III
		Page.		
Absalom, J. L., resignation.....		4		
Accidents.....		51	185	336
Acres of coal worked out.....		50	184	300
Ages of persons killed and injured.....			188	339
Annual report of Chief Mine Inspector.....		5	128	245
Annual report of Inspector, 1st. district.....		71	212	353
Annual report of Inspector, 2nd. district.....		74	215	353
Annual report of Inspector, 3rd. district.....		77	219	356
Annual report of Inspector, 4th. district.....		83	227	359

B

Barbour County, coal and coke production....	11	134	251
Barbour County, men employed.....	48	174	290
Boilers at the mines.....	51	184	300
Brooke County, coal production.....	12	134	252
Brooke County, men employed.....	48	174	290

C

Circular letter No. 1.....	103		
Coal, machine mined.....	33	149	272
Coal and Coke production since 1873.....	8		
Coal and Coke production.....	9	132	249
Coal and Coke production by counties.....	10	132	250
Coke Ovens.....	32	152	267
Comparative statement.....	7	131	248
Condition of mines.....	64	210	361
Condition of mines.....	84	228	362
Cost of powder.....	39	166	282

D

Days worked at mines and ovens.....	49	171	287
Directory of mines.....	87	228	361
Districts, inspection.....	71	211	352

E

Elm Grove Shaft.....	67		
Explosion of gas.....	47	170	301
Explosion of powder.....	47	170	301

F

Fayette County Coal and Coke production....	24	142	261
Fayette County men employed.....	48	179	293
First mining district, inspector's report.....	71	212	353
Fourth mining district, inspector's report....	83	227	359

G

Gas explosion.....	47	170	301
Gas explosion, Red Ash.....			303
Gaseous mines.....	47		301
General rules.....	99		
Glendale shaft.....	66		
Graphic representation Coal and Coke produc- tion.....	9		

H

Hancock County coal production.....	12	134	252
Hancock County, men employed.....	48	174	290
Harrison County, Coal and Coke production..	13	134	253
Harrison County, men employed.....	48	174	291
Hospital, miners'.....	96		
Hutchinson mine fire.....		212	

I

Index			393
Injured, men.....	50	185	336
Improvements at mines.....	41	167	283
Inspections made.....	63	210	352
Inspection districts.....		211	352
Introduction	3		245

K

Kanawha County, Coal and Coke production..	21	140	259
Kanawha County, men employed.....	48	177	292
Killed, men.....	50	185	336

L

Law, mining.....			381
Law, observance of.....	99		
Legislation suggested.....	108		372
Letter of transmittal.....	1	127	245
Lewis, S. A., resignation.....	4		
Locomotives, mine.....		159	297

M

Marion County, Coal and Coke production,...	14	136	254
Marion County, men employed.....	48	175	291
Marshall County coal production.....	15	136	255
Marshall County, men employed.....	48	175	291
Mason County, coal production.....	23	140	260
Mason County, men employed.....	48	178	293
Men employed at mines.....	48	171	287
Men employed at coke ovens.....	32	171	287
Mercer County, Coal and Coke production....	31	146	266
Mercer County, men employed.....	48	183	296
Mineral County, Coal production.....	15	136	255
Mineral County, men employed.....	48	175	291
Miners' Hospital.....	96		
Mine locomotives.....		159	297
Mining machines.....	33	149	272
Mining law.....			381
Mine fire, Hutchinson.....		212	
Mingo County, Coal production.....	28	144	264
Mingo County, men employed.....	48	181	295
Monarch mine.....	68		
Monongalia County, Coal and Coke production	16	136	256
Monongalia County, men employed.....	48	176	292
Moundsville shaft.....	65		
McDowell County, Coal and Coke production	29	144	265
McDowell County, men employed.....	48	182	295

N

Nationality of persons killed and injured.....	56	188	339
Needed legislation.....	108		373
Nicholas County, men employed.....	48	181	

O

Observance of the mine law.....	99		
Ohio County, Coal production.....	17	136	256
Ohio County, men employed.....	48	176	292
Order in production by counties.....	11	148	251
Ovens, coke.....	32	152	267

P

Paint Creek hospital.....	96		
Plate No. 1.....	9		
Powder explosion.....	47	170	301
Powder used at the mines.....	39	166	282
Powder, cost of.....	39	166	282
Preston County, Coal and Coke production...	18	136	257
Preston County, men employed.....	48	176	292
Production of Coal and Coke since 1873.....	8		
Production of Coal and Coke.....	9	130	249
Production of Coal and Coke by counties.....	10	132	250
Production of Coke.....	32	130	267
Price of Coal and Coke.....	36	157	276
Putnam County, Coal production.....	23	140	260
Putnam County, men employed.....	48	178	293

Q

Qualifications of mine bosses	107		373
-------------------------------------	-----	--	-----

R

Railroad and River transportation	37	163	280
Raleigh County coal and coke production	27	144	264
Raleigh County, men employed	48	181	295
Randolph County, coal and coke production ..		138	258
Randolph County, men employed.....		183	292
Red Ash, mine explosion			303
Rules, general	99		

S

Screening bill	105		
Second mining district, Inspector's Report....	74	215	353
Selling price of coal and coke	36	157	276
Steam boilers at the mines	51	184	300
Store checks in Illinois	106		
Strikes at coal mines	42	168	284
Summary of annual report	7	128	247
Supreme Court decision	102		

T

Taylor County, coal production	19	138	257
Taylor County, men employed	48	176	292
Third Mining District, Inspector's Report	77	219	356
Transmittal letter	1	127	245
Transportation of coal and coke	37	163	280
Tucker County, coal and coke production	20	138	258
Tucker County, men employed	48	177	292

U

Unconstitutional laws	105		
-----------------------------	-----	--	--

V

Ventilation, kinds	49	231	363
--------------------------	----	-----	-----

W

Wages paid	36	157	276
------------------	----	-----	-----

Y

Yield of coke	32	152	267
---------------------	----	-----	-----

5-72

